

EXHIBIT A



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Sibley

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(54) **STORAGE PRESERVATION AND
TRANSPORT FOR A CONTROLLED
SUBSTANCE**

USPC 206/213.1; 206/265; 206/459.5;
206/524.8; 53/408; 53/432

(58) **Field of Classification Search**

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53/403, 408, 467, 471, 473, 476, 432;
220/62.11-62.13

See application file for complete search history.

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patent is extended or adjusted under 35
U.S.C. 154(b) by 191 days.

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15, 2010.

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B65D 81/26	(2006.01)
B65B 61/20	(2006.01)
B65D 81/20	(2006.01)
B65B 29/00	(2006.01)

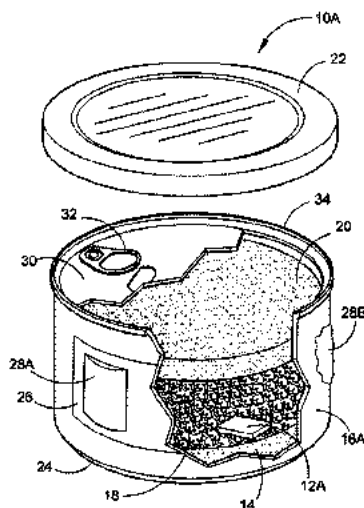
(52) **U.S. Cl.**

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(2013.01); **B65D 2517/0041** (2013.01); **B65D**
2251/0071 (2013.01); **B65D 2251/0015**
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(57) **ABSTRACT**

The present application provides a unique process of canning a controlled substance where the cans are hermetically sealed and clearly identified in a number of different ways. The process will begin by inserting a packing and dehumidifying agent, preferably a formed rice cake. The controlled substance is then inserted. In some cases the rice cakes will be eliminated or just a single rice cake will be used on the top or the bottom. If the process of storing the controlled substance in an inert atmosphere is desired, the oxygen in the container is replaced with gaseous nitrogen. After the container has been sealed in the conventional pop-top canning procedure; an identifying scent substance is permanently adhered to the can or label. An internal or external microchip could be used to detect, track and trace the container filled with a controlled substance.

20 Claims, 5 Drawing Sheets



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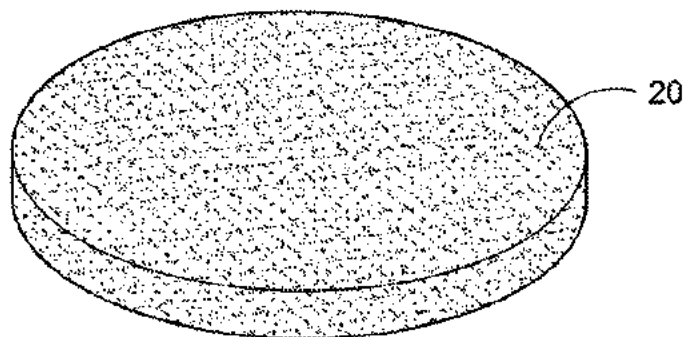
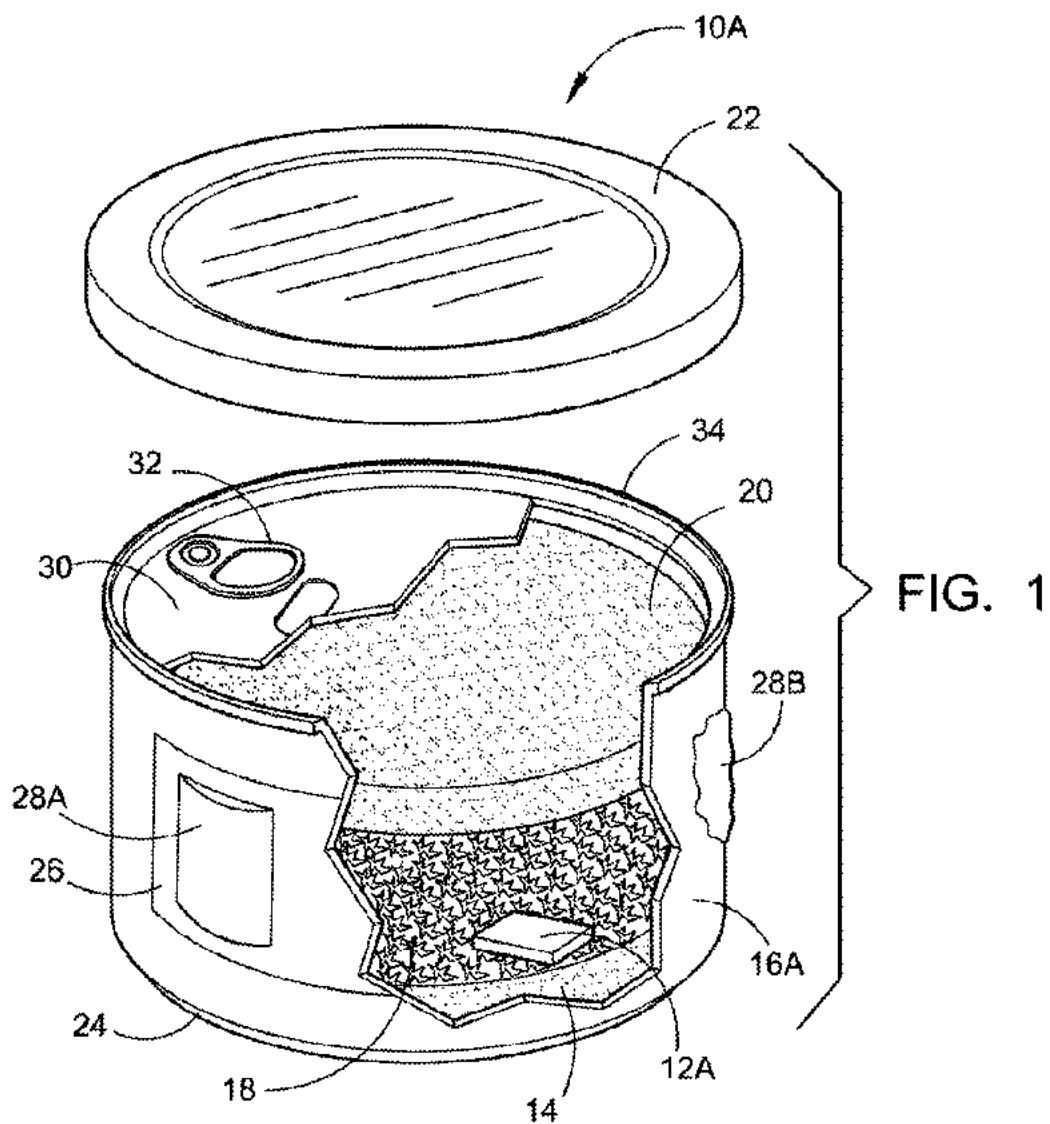
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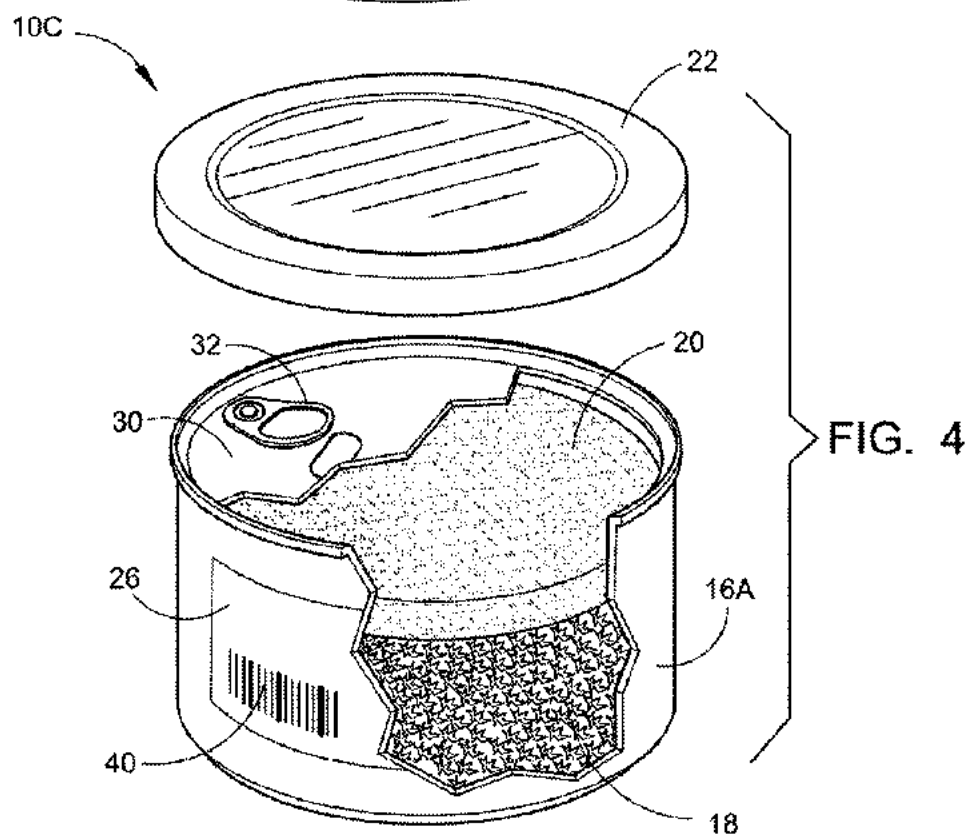
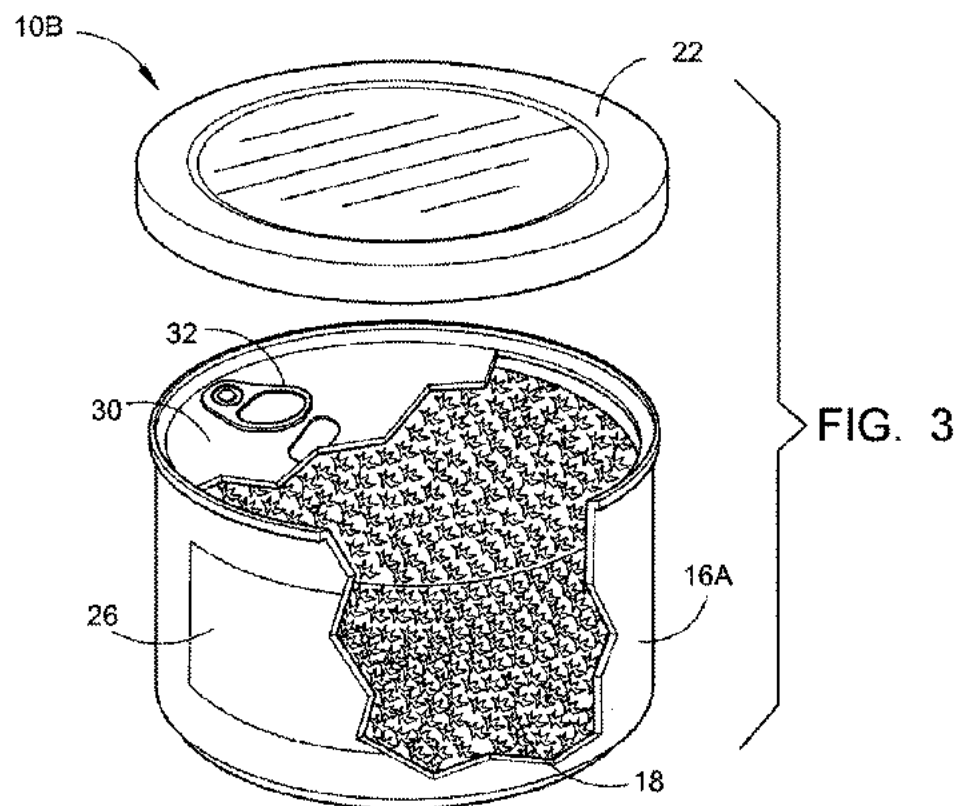


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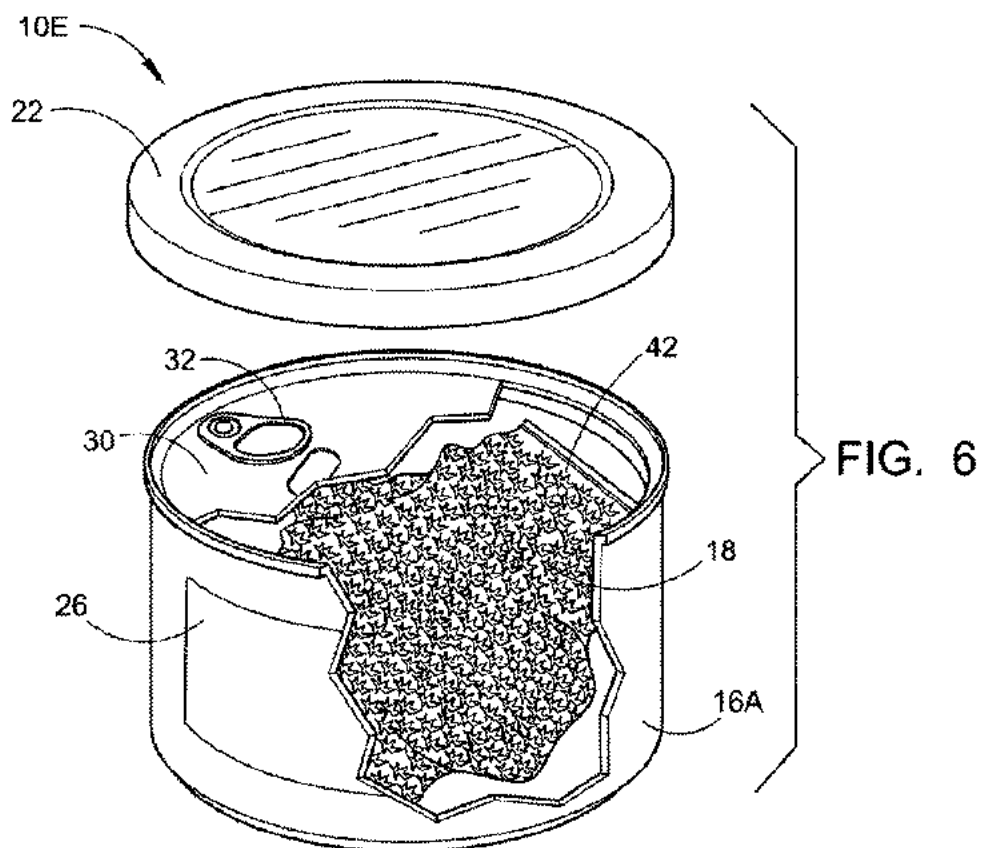
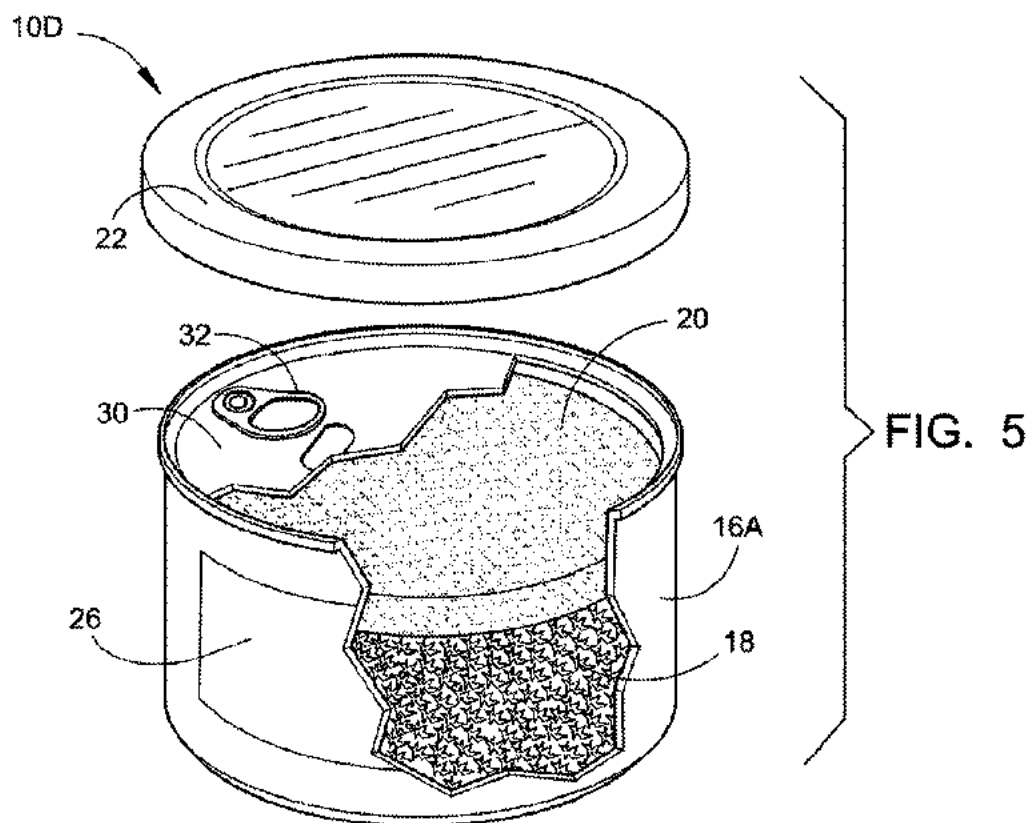


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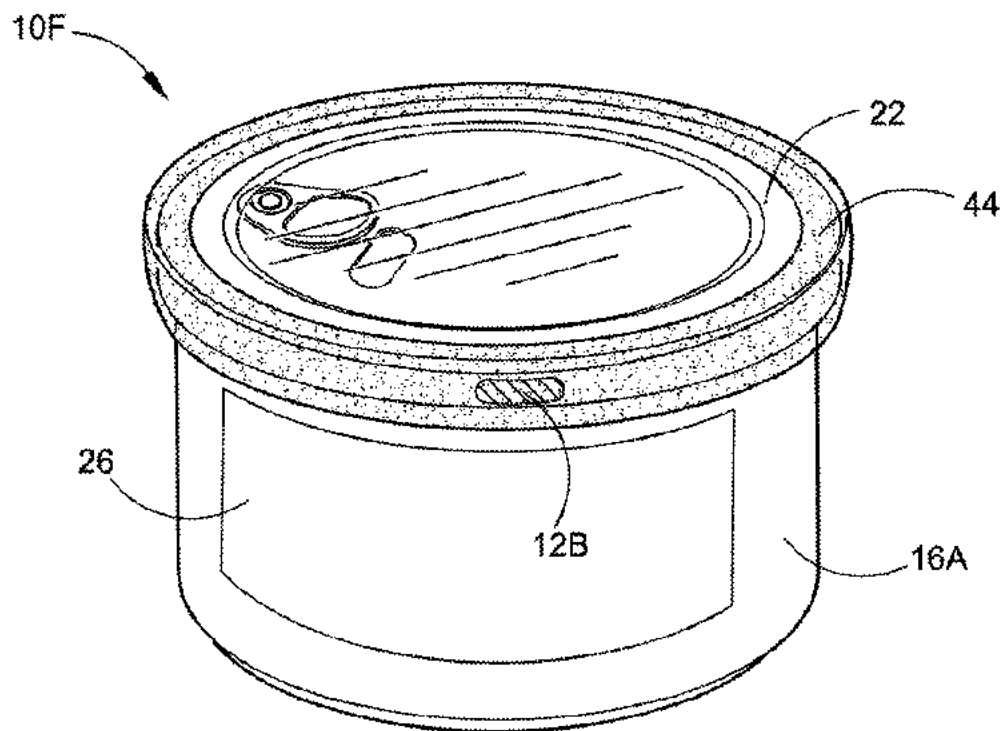


FIG. 7

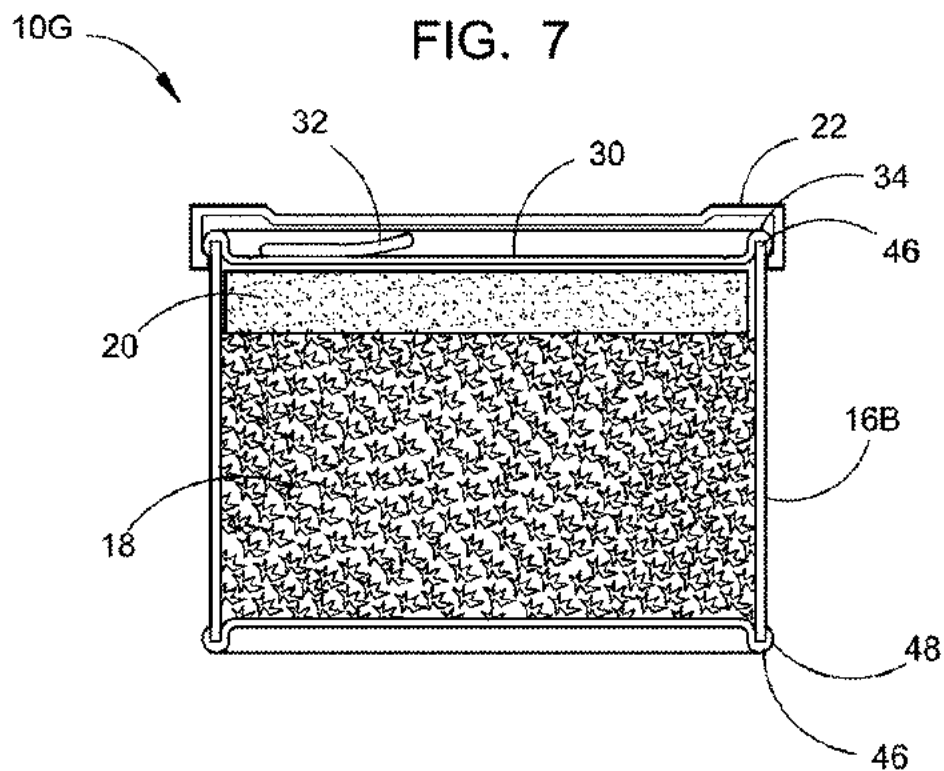


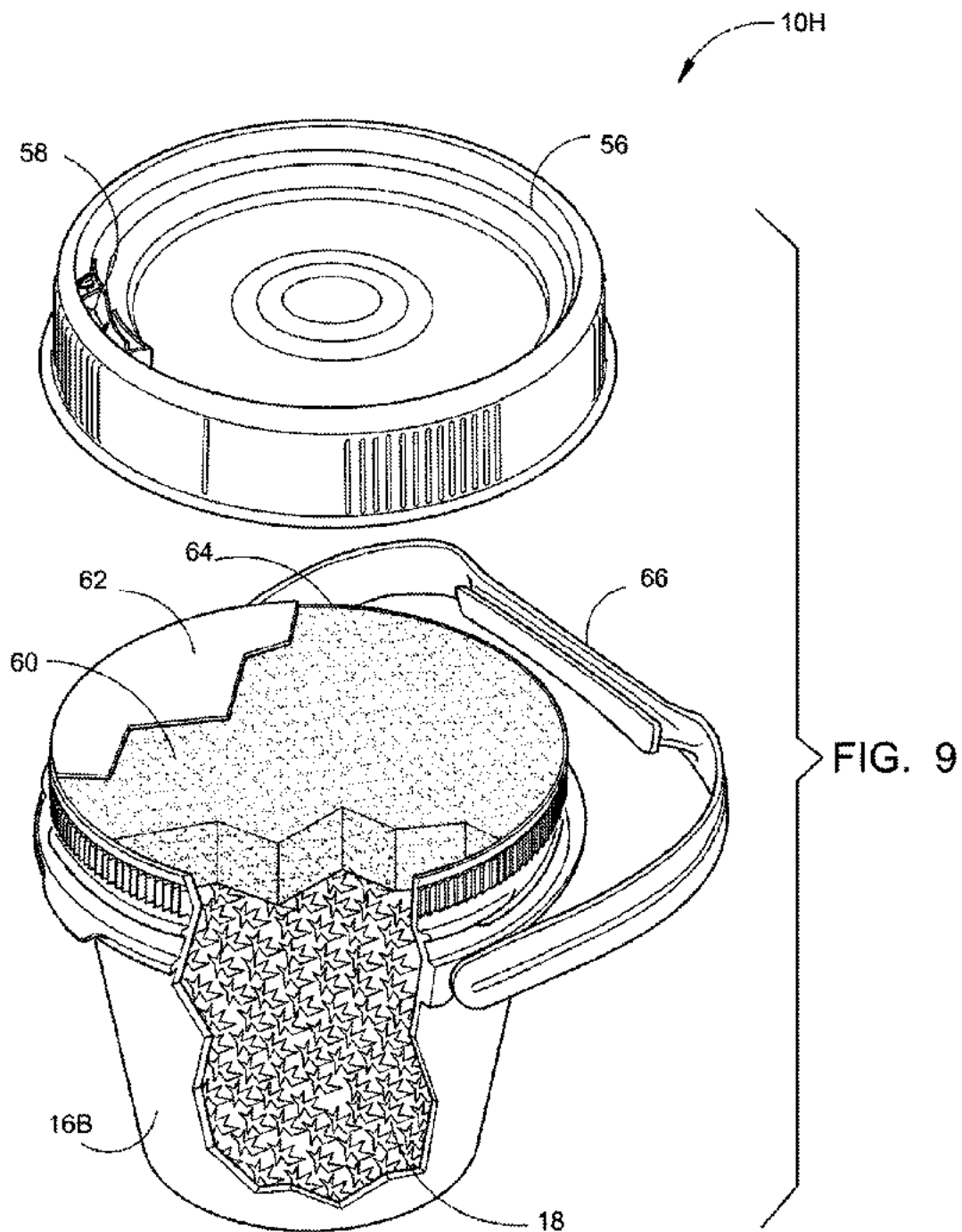
FIG. 8

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STORAGE PRESERVATION AND TRANSPORT FOR A CONTROLLED SUBSTANCE

This application claims benefit of the provisional applica- 5
tion No. 61/383,006, filed on Sep. 15, 2010.

FIELD OF THE INVENTION

This application provides a unique container for storing 10
and transporting a controlled substance and a canning process
for controlled substances where the cans are hermetically
sealed and the contents are clearly identified in a number of
different ways. In particular, the controlled substance con-
tainers are optimized for long term storage and can be readily 15
detected, tracked and traced when filled with a controlled
substance.

The transport and sales of controlled substances has gen-
erally in the past been handled through pharmaceutical sup-
pliers but with several states looking at the legalized sales of 20
products like Marijuana there is a great need to control, track
and document these sales. Containers carrying controlled
substances should be readily identifiable both by sight and
odor. Dogs are often used to locate these items, but if they are
sealed where the air and moisture in the container is replaced 25
with an inert gas along with as dehumidifying agents before
sealing, dogs might not be able to locate these items. Ident-
ifying odor materials can be attached directly to the outside of
the container or to the label. There are other various ways to
identify these containers like colorization of the containers 30
and their labels, bar coding and microchips either on the
inside or affixed to the outside. Problems will definitely arise
from the transport of these materials from a state that legalizes
it to a state where its possession is still illegal. Clearly iden-
tifying these containers will help to alleviate some of these 35
problems. If states that legalize the sales of controlled sub-
stances like Marijuana would stipulate that it is only to be sold
in an identifiable sealed container, there could be a greater
control of its propagation, sales and the state taxes paid. With
the legalization and controlled sales, the price would come 40
down so that it would not be profitable for the illegal growing
of the products.

Numerous innovations for pharmaceutical products have
been provided in the prior art that are described as follows.
Even though these innovations may be suitable for the spec- 45
ific individual purposes to which they address, they differ
from the present design as hereinafter contrasted. The follow-
ing is a summary of those prior art patents most relevant to
this application at hand; as well as a description outlining the
difference between the features of the canning process of 50
controlled substances and the prior art.

U.S. Pat. No. 5,135,144 of David C. Blakley describes a
belt worn and readily portable medical supply pouch for
holding a supply of drug containers in a temperature stable
and contamination resistant environment is disclosed. A sub- 55
stantially rectangular housing fabricated from a thick insulat-
ing material comprising a bottom, two side panels, a front and
a back panel with an open top. A housing thus formed defines
a cavity therein for storing a supply of drug cartridges. A
protective panel extending across the opening of the housing 60
and angled downward into the cavity is provided to prevent
contamination from entering the cavity, while providing
access by the hand of a user through the opening and down
into the cavity for retrieving one of the drug containers. The
housing is covered inside and out by a water-proof and con- 65
tamination-resistant nylon material. Two belt loop members
are affixed to the back panel of the housing for attaching the

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pouch to the waist belt of a user. An internal pocket inside the
cavity of the housing is provided for containing a heating
element for heating the interior cavity. An outside auxiliary
pocket is attached to the outside surface of the front panel for
storing items not requiring an insulated and contamination
free environment.

This patent describes a belt worn and readily portable
medical supply pouch for holding a supply of drug containers.
It does not describe a single sealed container for a controlled
substance like Marijuana.

U.S. Pat. No. 5,836,474 Georan Wessberg tells of an inven-
tion that relates to a medicament storage device which
includes a storage plate having a plurality of storage spaces
for storing quantities, such as medicament dosages and a base
unit which has a memory and an alarm function. The device is 15
characterized in that the openings of respective storage spaces
are provided with a closure means in the form of a long and a
short flap which overlap one another and which are either
spring mounted or consist of elastic material. The flap overlap
regions include indicating means which illustrate in which
direction passage has occurred through the opening and/or
with detecting means which produce a signal relating to the
direction of the last passage through the opening.

This patent tells of an invention that relates to a medica-
ment storage device which includes a storage plate having a
plurality of storage spaces for storing quantities, such as
medicament dosages. It again does not describe a single
sealed container for a controlled substance like Marijuana.

U.S. Pat. No. 5,866,219 of Paul McClure et al. relates to a
product information label system having a base member and
a foldout medical information pamphlet which is applied to
medicinal and drug containers where the foldout pamphlet is
resealable for subsequent use.

This patent relates to a product information label system
and does not deal with any form of containment means.

U.S. Pat. No. 6,793,081 Jay S. Derman describes a locking
neck ring device that is placed over a capped bottle or con-
tainer and grips the bottle neck ring, and together with a
padlock or other securing means, prevents access to the bottle
cap. The locking device comprises a clamp member that
jackets a capped bottle neck; a cover which fits over the clamp
member causing it to clamp on to the neck below the neck
ring, and means to hold the clamp member to the cover.
Provision is made for attaching a padlock or other securing
means which holds the locking ring device in place. The
bottle or container cap can then not be accessed for removal.
The device is applicable to all sizes of drug containers, wine
and liquor bottles for effectively locking access to the con-
tainer contents.

This patent describes a locking neck ring device that is
placed over a capped bottle or container and grips the bottle
neck ring. It does not with any specific containment means.

None of these previous efforts, however, provides the ben-
efits attendant with the process of canning a controlled sub-
stance and do not mention the use of an inert gas, as a means
of providing long-term storage. The present process of can-
ning a controlled substance achieves its intended purposes,
objects and advantages over the prior art through a new, useful
and unobvious combination of method steps and component
elements at a reasonable cost and by employing readily avail-
able materials.

In this respect, before explaining at least one embodiment
of the canning a controlled substance in detail it is to be
understood that the process is not limited to just a specific
process set forth in the following description or illustrated in
the drawings. The canning process of controlled substances is
capable of having other embodiments and of being applied in

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various ways. In addition, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting. As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for creating other processes for carrying out the several purposes of the present application. It is important, therefore, that the claims be regarded as including such equivalent construction insofar as they do not depart from the spirit and scope of the present application.

SUMMARY OF THE INVENTION

The principal advantage of the process of canning a controlled substance is to control the sales of the products.

Another advantage of the process of canning controlled substances is the control of the propagation of the products.

Another advantage of the process of canning controlled substances is to receive the sales tax for the products sold.

Another advantage of the process of canning controlled substances is the option of the removal of the oxygen and moisture while keeping the substance stored in an inert gaseous atmosphere.

Another advantage of the process of canning controlled substances is that with an external odor substance, dogs will be able to locate it.

Another advantage of the canning of controlled substances is that they can have a micro-chip on the inside or outside for product locating.

Another advantage of the canning of controlled substances is that they can have a bar code on the outside for product identification.

Another advantage in the process of the canning of controlled substances is that a variety of different packing and dehumidifying materials can be used, including formed rice cakes.

Another advantage is when formed rice cakes are used as a packing and dehumidifying agent, they can be easily disposed of.

Another advantage in the process of the canning of controlled substances is an inexpensive form container can be made in different sizes and shapes.

Yet another advantage in the process of canning a Controlled substance is it can use a variety of different inert gases in the manufacturing process if desired.

These together with other advantages in the process of canning a controlled substance, along with the various features of novelty, which characterize the process, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the process of the canning of a controlled substance and its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred and alternate embodiments of the process of canning controlled substances. There has thus been outlined, rather broadly, the more important features of the process in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the process of the canning of a controlled substance that will be described hereinafter and which will form the subject matter of the claims appended hereto.

The preferred embodiment of the process of the canning a controlled substance will be placing the controlled substance into the preformed metal container with an enameled surface on the inside and outside. The process will begin by inserting

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a packing and dehumidifying agent, preferably a formed rice cake. If a microchip is desired within the container it is put in before inserting the controlled substance. The controlled substance is then inserted with a second preformed rice cake on the top. In some cases the rice cakes will be eliminated or just a single rice cake will be used on the top or the bottom. All of the different configurations of containing the controlled substance with rice cakes will be covered within the scope of this application.

If the process of storing the controlled substance in an inert atmosphere is desired the container is placed into a vacuum chamber. The chamber doors are closed and a vacuum of approximately 29 inches of mercury is drawn on the chamber. This removes all of the atmosphere/oxygen and atmospheric moisture that may be present. The vacuum is then halted and the chamber is then flooded with gaseous nitrogen. The gas is inert and dry, creating a benign atmosphere inside the container and around the controlled substance. This dry, inert environment now created inside the container will halt the degradation of the controlled substance. The shelf life/storage time created by this process should give the controlled substance stored inside the container almost an unlimited life regardless of the environment outside the container. This application is not limited to gaseous nitrogen. Alternate methods can include liquid nitrogen, oxygen absorbers along with other inert gases such as carbon dioxide, helium, and argon. Any process used to create an inert/benign atmosphere while canning the controlled substances will be covered within the scope of this application.

After the evacuation/flooding process is complete the chamber doors are opened and the container, filled with nitrogen, is pushed out and immediately put through the conventional canning process. The nitrogen gas that is in the container at this time is very heavy, dense, and cold and is not naturally trying to diffuse into the air in the room allowing for a reasonable amount of time to apply a lid and seal the container. An alternate method of packaging would be to put the prepackaged controlled substance in a sealable plastic bag filled with nitrogen and place it within the container.

After the container has been sealed in the conventional pop-top canning procedure an identifying scent substance is permanently adhered to the can or label. If an external microchip is desired it can be adhered to the outside of the can or be incorporated into a plastic removable locking ring around the top of the can. The label can also have an identifying bar code imprinted on it or the bar code can be printed on the can.

An alternate embodiment of the of the process of canning a controlled substance would be the use of a polymer round pail type of container having a lid that screws on with a ratcheting locking mechanism and an O-ring seal. Once the polymer round pail has been filled, a cushioning and dehumidifying element such as a formed rice cake is placed on top of the substance. If the process of storing the controlled substance in an inert atmosphere is desired it is then placed into a vacuum chamber. The chamber doors are closed and a vacuum of approximately 29 inches of mercury is drawn on the chamber removing all of the atmosphere/oxygen and atmospheric moisture that may be present. The vacuum is then halted and the chamber is then flooded with gaseous nitrogen. The gas is inert and dry, creating a benign atmosphere inside the container and around the product. This dry, inert environment now created inside the container will halt degradation of the controlled substance. This application is not limited to gaseous nitrogen. Alternate methods can include liquid nitrogen, oxygen absorbers along with other inert gases such as carbon dioxide, helium, and argon. Any process used to create an inert/benign atmosphere inside the

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container will be covered within the scope of this application. Additional sealing will include a foil membrane attached over the top edge of the container with an O-ring in the lid making the final sealing means.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of this application, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art. All equivalent relationships to those illustrated in the drawings and described in the specification intend to be encompassed by the present disclosure. Therefore, the foregoing is considered as illustrative only of the principles of the process of the canning of controlled substances. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the design to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of this application.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and form a part of this specification, illustrate embodiments of the process of canning a controlled substance and together with the description, serve to explain the principles of this application

FIG. 1 depicts a perspective view of a pop-top can configured to contain a controlled substance and enable identification of the internal contents of such container, cut away illustrating a microchip on the preformed rice cake on the bottom of the can with the controlled substance between a second preformed rice cake with the plastic lid raised above.

FIG. 2 depicts a perspective view of a preformed rice cake.

FIG. 3 depicts a perspective view of a pop-top can configured to contain a controlled substance and enable identification of the internal contents of such container, cut away illustrating the container completely filled with the controlled substance with the plastic lid raised above.

FIG. 4 depicts a perspective view of pop-top can configured to contain a controlled substance and enable identification of the internal contents of such container, cut away illustrating the controlled substance on the bottom of the container with a preformed rice cake on top with a barcode on the label and the plastic lid raised above.

FIG. 5 depicts a perspective view of a pop-top can configured to contain a controlled substance and enable identification of the internal contents of such container, cut away illustrating the controlled substance on the bottom of the container with a preformed rice cake on top and the plastic lid raised above.

FIG. 6 depicts a perspective view of a pop-top sealed can configured to contain a controlled substance and enable identification of the internal contents of such container, with the controlled substance in a sealed plastic bag.

FIG. 7 depicts a perspective view of a pop-top sealed can configured to contain a controlled substance and enable identification of the internal contents of such container, with the plastic removable locking ring incorporating a microchip.

FIG. 8 depicts a cross section of pop-top can configured to contain a controlled substance and enable identification of the internal contents of such container, with a crimped edge on the bottom as well as the top. it should be understood that a conventional three-part tin (metal) can could be used, with or without a pop-top feature. This means that if a conventional

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three-part can is used without a pop-top feature, then it would necessitate a can opener be used to open the can to make the contents accessible.

FIG. 9 depicts a perspective view of an alternate embodiment using a polymer round pail type of container having a lid that screws on with a ratcheting locking mechanism broken away illustrating the internal components.

For a fuller understanding of the nature and advantages of the process of canning a controlled substance, reference should be had to the following detailed description taken in conjunction with the accompanying drawings which are incorporated in and form a part of this specification, illustrate embodiments of the process together with the description, serve to explain the principles of this application.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, wherein similar parts of the process of canning a controlled substance is illustrated there is seen in FIG. 1 a perspective view of a conventional pop-top can assembly 10A cut away illustrating the internal microchip 12A on the lower preformed rice cake 14 at the bottom of the container 16A. The controlled substance 18 is between the upper preformed rice cake 20 and lower preformed rice cake 14 with the plastic lid 22 above the container 16A. The container 16A will consist of a conventional pressed formed metal can without a crimped edge on the container bottom edge 24. The container 16A will have a label 26 where an external odor substance 28A can be located, or the external odor substance 28B can be adhered to the outside surface of the container 16A. The process of storing the controlled substance in an inert atmosphere is optional at this time. The conventional pop-top lid 30 with the opening tab 32 will be sealed to the container top edge 34 of the container 16A.

FIG. 2 depicts a perspective view of a preformed rice cake 14, 20.

FIG. 3 depicts a perspective view of a pop-top can 10B configured to contain a controlled substance and enable identification of the internal contents of such container, cut away illustrating the container completely filled with the controlled substance 18 with the plastic lid 22 above container 16A.

FIG. 4 depicts a perspective view of a pop-top can 10C configured to contain a controlled substance and enable identification of the internal contents of such container, cut away illustrating the controlled substance 18 on the bottom of the container 16A with the upper preformed rice cake 20 with a barcode 40 on the label 26 and the plastic lid 22 above the container 16A.

FIG. 5 depicts a perspective view of a pop-top can 10D configured to contain a controlled substance and enable identification of the internal contents of such container, cut away illustrating the controlled substance 18 on the bottom of the container 16A with the upper preformed rice cake 20 on top and the plastic lid 22 above the container 16A.

FIG. 6 depicts a perspective view of a pop-top sealed can 10E configured to contain a controlled substance and enable identification of the internal contents of such container, with the controlled substance 18 in a sealed plastic bag 42.

FIG. 7 depicts a perspective view of pop-top sealed can 10F configured to contain a controlled substance and enable identification of the internal contents of such container, with the plastic removable locking ring 44 over the plastic lid 22 and the top edge 34 of the container 16A incorporating the external microchip 12B.

FIG. 8 depicts a cross section of a three part pop-top can 10G configured to contain a controlled substance and enable

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identification of the internal contents of such container, with a crimped edge **46** on the container bottom edge **48** as well as the container top edge **34**.

FIG. 9 depicts a perspective view of an alternate embodiment **10H** of the process of canning a controlled substance in bulk amounts using a polymer round pail type of container **16B** having a lid **56** that screws on with a ratcheting locking mechanism **58**. The polymer round pail **16B** has been broken away illustrating the controlled substance **18** and the rice cake packing material **60**. The process of storing the controlled substance in an inert atmosphere is optional at this time. A film seal **62** covers the top surface attached to the pail edge **64**. The polymer round pail **16B** has a pivoting handle **66**. This polymer round pail container **16B** would be used for bulk controlled substance storage and transport.

In summary, there are four basic configurations the controlled substance could be canned, (1) canned loosely alone with no spacer or insert; (2) canned with only a top spacer or insert; (3) canned with both a top and bottom spacer or insert, and (4) canned pre-packaged in a sealed plastic bag or foil envelope. Finally, bulk amounts of controlled substances could be stored and transported in large sealed polymer pails, with and without spacers or inserts.

Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

I claim:

1. A container for preservation, storage, tracking and transport of a controlled substance comprising:

- (a) a one piece lower can portion containing a controlled substance;
 - (b) a one piece lid having a pop-top opening affixed to said lower can portion;
 - (c) a sealable plastic bag and an insert spacer means for taking up empty space left within said lower can portion; and
 - (d) means for identifying the controlled substance held within said container;
- wherein the controlled substance is placed in said sealable plastic bag and said sealable plastic bag is sealed before the container is sealed.

2. The container for preservation, storage, tracking and transport of a controlled substance according to claim **1**, wherein said means for identifying the internal contents of said container includes a label affixed to the outer surface of said container.

3. The container for preservation, storage, tracking and transport of a controlled substance according to claim **1**, wherein said means for identifying the internal contents of said container includes a bar code affixed to the outer surface of said container.

4. The container for preservation, storage, tracking and transport of a controlled substance according to claim **1**, wherein said means for identifying the internal contents of said container includes a microchip affixed to the outer surface of said container.

5. The container for preservation, storage and transport of a controlled substance according to claim **1**, wherein the container comprises a using a polymer round pail type of container having a lid.

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6. The container for preservation, storage, tracking and transport of a controlled substance according to claim **1**, wherein the controlled substance is held loosely within the container without the use of a spacer insert.

7. The container for preservation, storage, tracking and transport of a controlled substance according to claim **1**, wherein said sealable plastic bag includes a sealable foil envelope.

8. The container for preservation, storage, tracking and transport of a controlled substance according to claim **1**, wherein said insert spacer means includes a top spacer insert.

9. The container for preservation, storage, tracking and transport of a controlled substance according to claim **1**, wherein said insert spacer means includes both a top spacer insert and a bottom spacer insert.

10. The container for preservation, storage, tracking and transport of a controlled substance according to claim **1**, wherein said container has the atmosphere evacuated and the container filled with an inert gas before the controlled substance is sealed inside.

11. A method for making a container for preserving, storing, tracking and transporting a controlled substance, comprising the steps of:

- (a) providing a one piece lower can portion for containing a controlled Substance;
 - (b) providing a one piece lid having a pop-top opening means thereon affixed to said lower can portion;
 - (c) providing a sealable plastic bag and an insert spacer means for taking up empty space left within said lower can portion;
 - (d) sealing a controlled substance within said lower can portion; and
 - (e) providing a means for identifying the controlled substance held within said sealed container;
- wherein the controlled substance is placed in said sealable plastic bag and said sealable plastic bag is sealed before the container is sealed.

12. The method for making a container for preservation, storage, tracking and transport of a controlled substance according to claim **11**, wherein said means for identifying the internal contents of said container includes a label affixed to the outer surface of said container.

13. The method for making a container for preservation, storage, tracking and transport of a controlled substance according to claim **11**, wherein said means for identifying the internal contents of said container includes a bar code affixed to the outer surface of said container.

14. The method for making a container for preservation, storage, tracking and transport of a controlled substance according to claim **11**, wherein said means for identifying the internal contents of said container includes a microchip affixed to the outer surface of said container.

15. The method for making a container for preservation, storage and transport of a controlled substance, according to claim **11**, wherein the container comprises a using a polymer round pail type of container having a lid.

16. The method for making a container for preservation, storage, tracking and transport of a controlled substance according to claim **11**, wherein the federally controlled substance is held loosely within the container without the use of a spacer insert.

17. The method for making a container for preservation, storage, tracking and transport of a controlled substance according to claim **11**, wherein said sealable plastic bag includes a sealable foil envelope.

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18. The method for making a container for preservation, storage, tracking and transport of a controlled substance according to claim 11, wherein said insert spacer means includes a top spacer insert.

19. The method for making a container for preservation, storage, tracking and transport of a controlled substance according to claim 11, wherein said insert spacer means includes both a top spacer insert and a bottom spacer insert.

20. The method for making a container for preservation, storage, tracking and transport of a controlled substance according to claim 11, wherein said container has the atmosphere evacuated and the container filled with an inert gas before the controlled substance is sealed inside.

* * * * *

EXHIBIT B



US009878821B2

(12) **United States Patent**
Sibley

(10) **Patent No.:** **US 9,878,821 B2**
(45) **Date of Patent:** **Jan. 30, 2018**

(54) **CONTAINER FOR THE STORAGE, PRESERVATION, IDENTIFICATION, TRACKING AND TRANSPORT OF A FEDERALLY CONTROLLED SUBSTANCE**

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B65D 85/70 (2013.01); *B65D 2203/06*
(2013.01); *B65D 2203/10* (2013.01); *B65D*
2203/12 (2013.01); *B65D 2251/0018*
(2013.01); *B65D 2251/0071* (2013.01); *B65D*
2517/0041 (2013.01)

(71) Applicant: **David P. Sibley**, Twin Falls, ID (US)

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(73) Assignee: **IDN2 Holdings, LLC**, Twin Falls, ID (US)

(58) **Field of Classification Search**

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B65D 85/12; *B65D 17/163*
USPC 206/213.1, 242, 265, 236, 459.5, 524.8
See application file for complete search history.

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 64 days.

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Primary Examiner — Juan K Bui

(74) Attorney, Agent, or Firm — Richard D. Clarke

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B65D 85/00 (2006.01)
B65B 31/00 (2006.01)
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B65B 61/20 (2006.01)
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B65D 43/02 (2006.01)
B65D 81/20 (2006.01)
B65D 81/26 (2006.01)

(Continued)

(52) **U.S. Cl.**

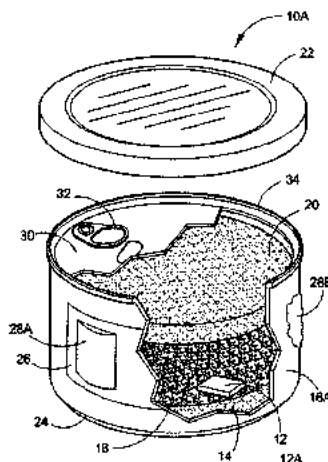
CPC *B65D 25/205* (2013.01); *B65B 7/28*
(2013.01); *B65B 29/00* (2013.01); *B65B 31/00*
(2013.01); *B65B 61/20* (2013.01); *B65D*
17/163 (2013.01); *B65D 25/14* (2013.01);
B65D 43/0225 (2013.01); *B65D 51/18*
(2013.01); *B65D 81/2069* (2013.01); *B65D*

(57)

ABSTRACT

The present application provides a container for storage, preservation, identification, tracking and transport of a federally controlled substance comprising: (a) a one or more piece airtight container having an exterior surface and an interior surface, an upper portion and a lower portion, configured for containing a federally controlled substance; (b) an inner coating liner lining said interior surface of said airtight container; (c) a one piece tamper resistant easy open lid affixed to said upper portion of said airtight container; and (d) identifying indicia located on the exterior surface for identifying the contained federally controlled substance contents within said container, wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside.

18 Claims, 7 Drawing Sheets



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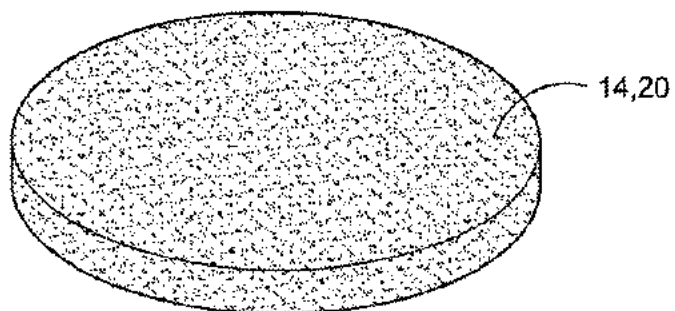
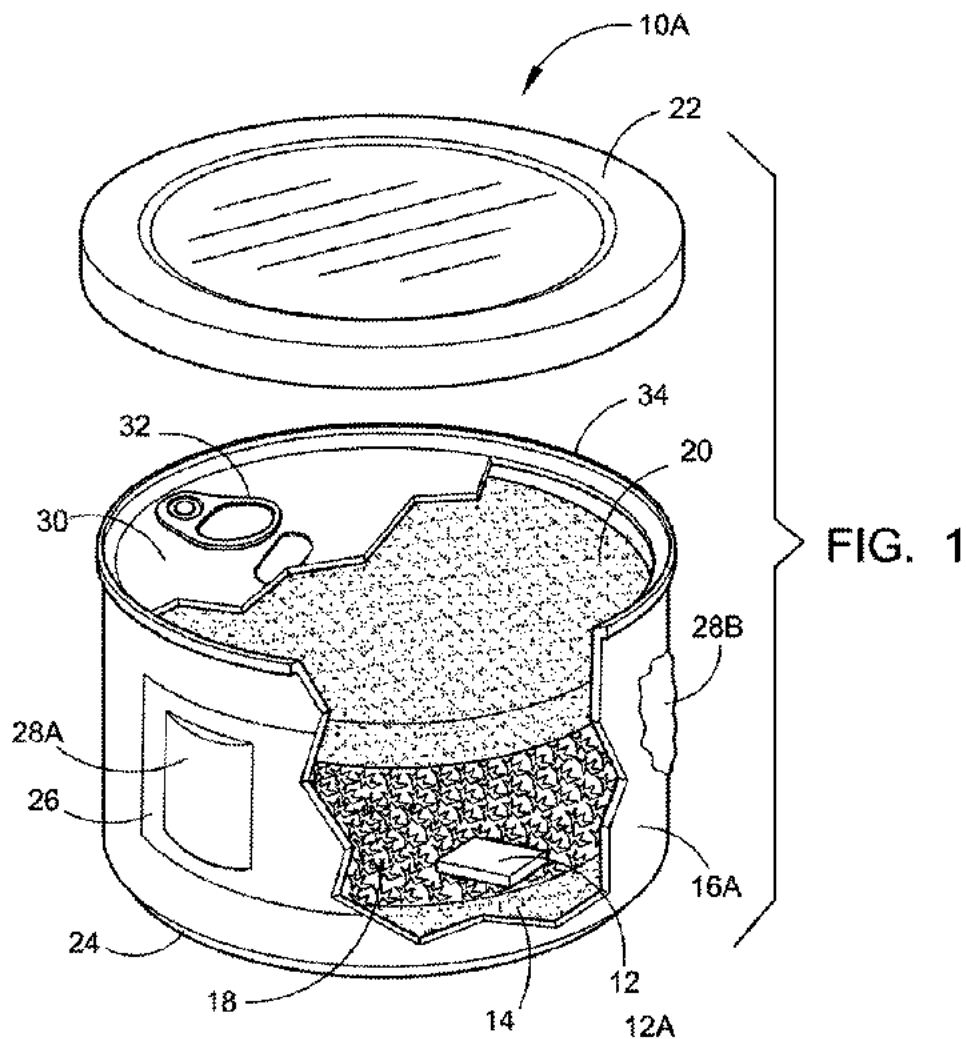


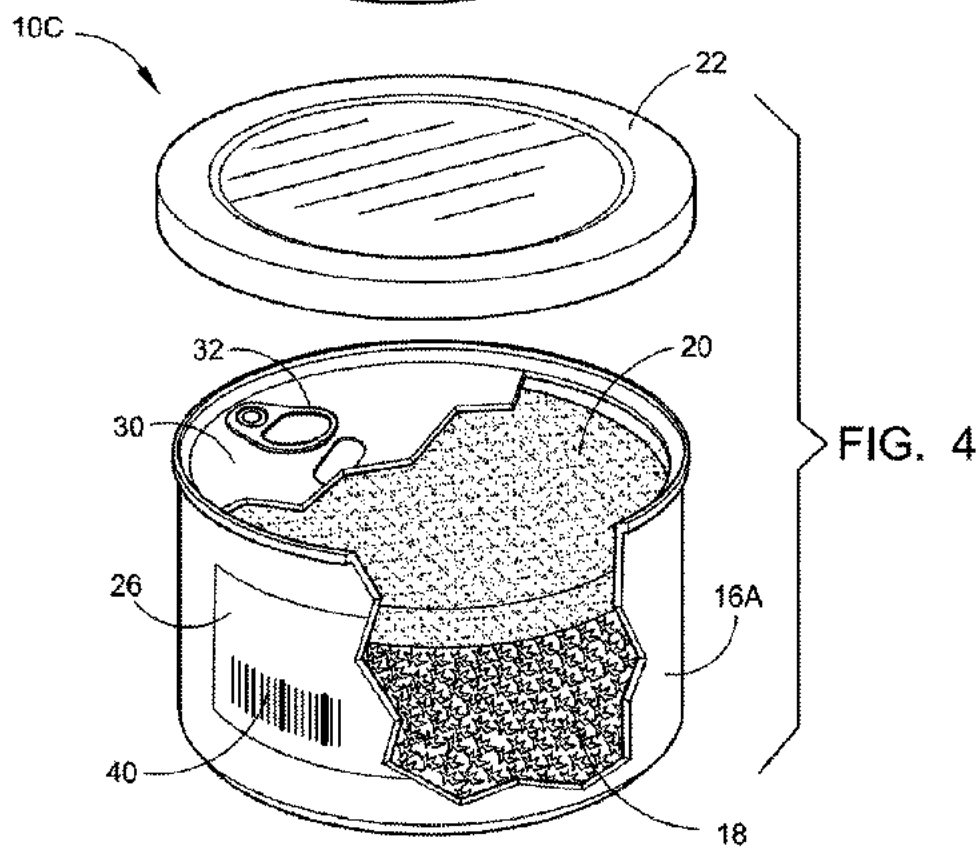
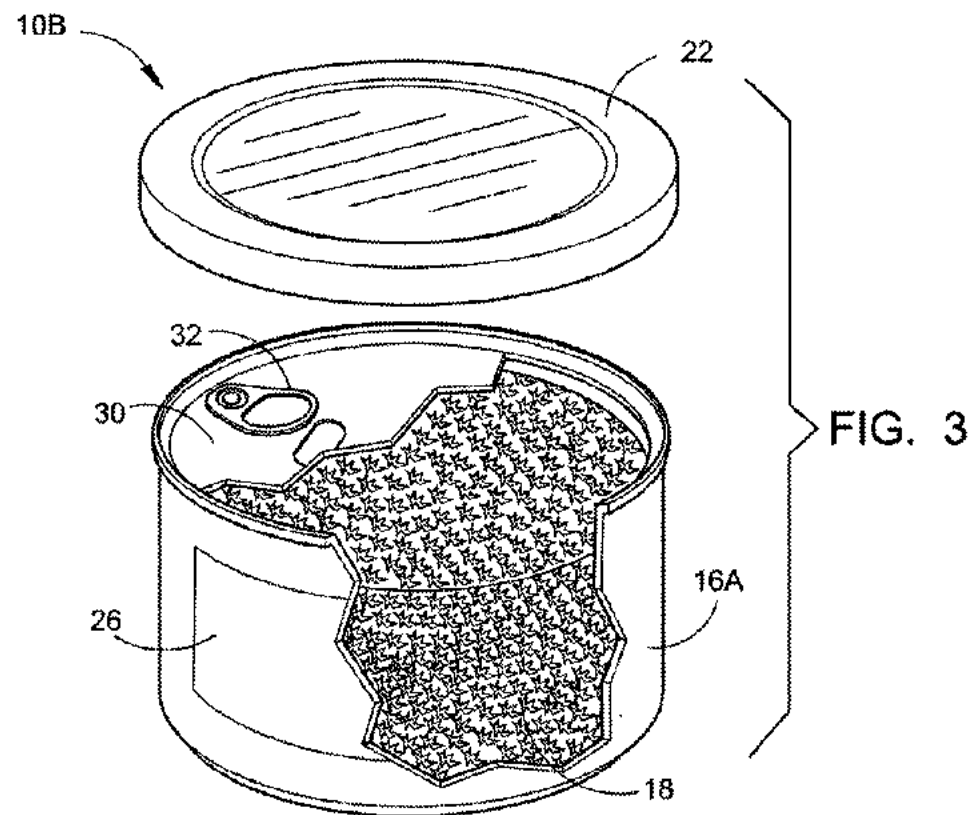
FIG. 2

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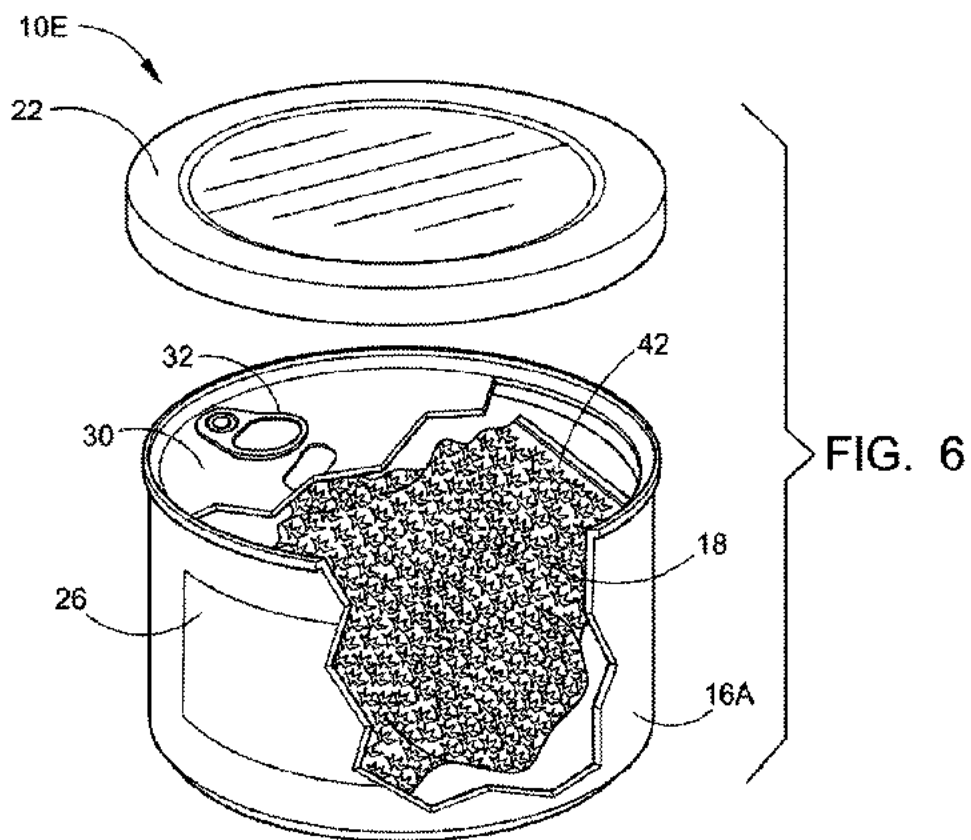
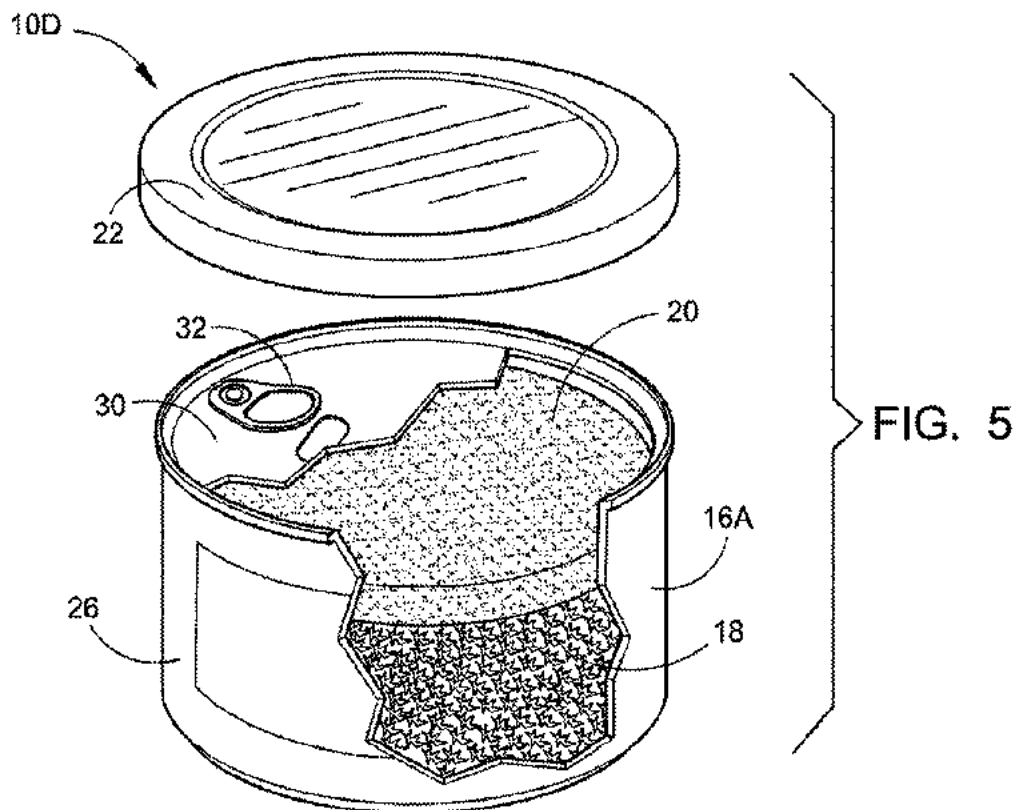


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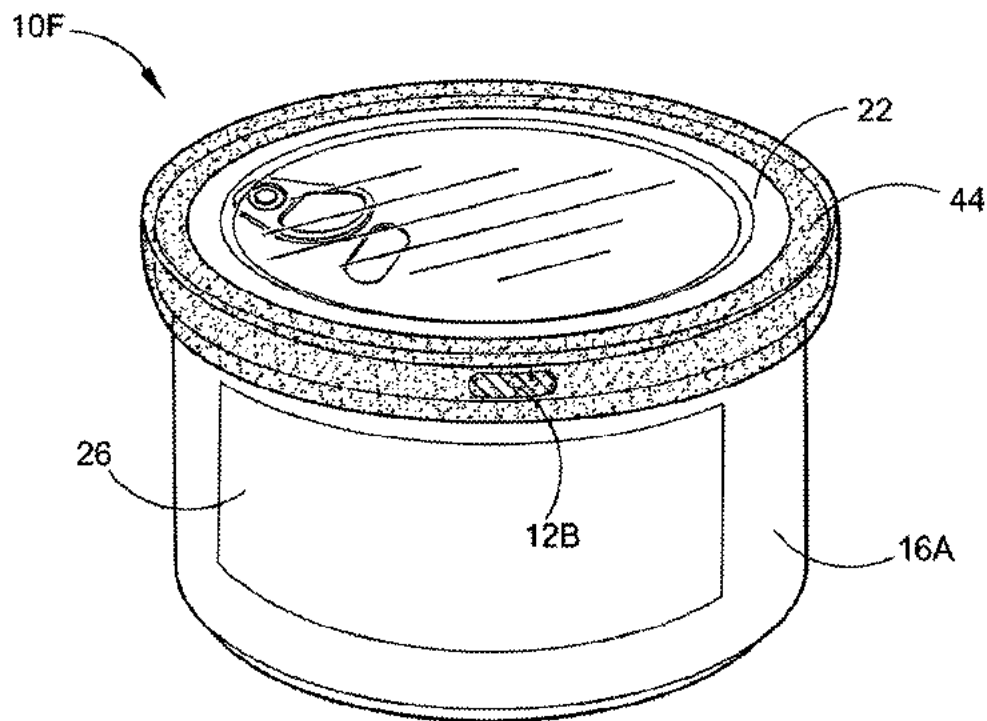


FIG. 7

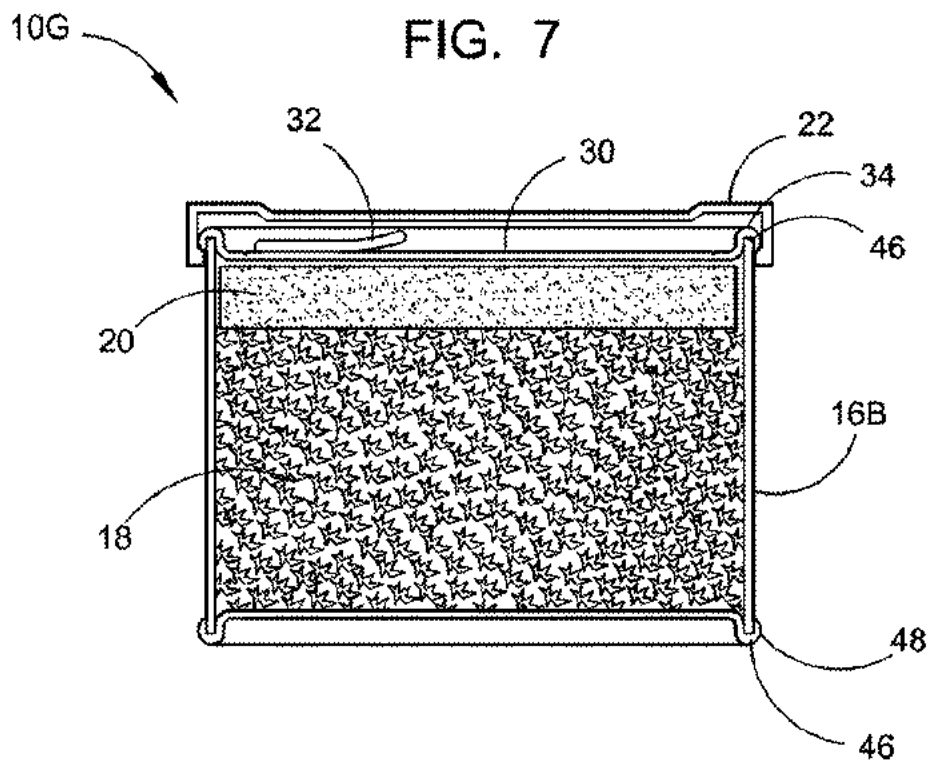


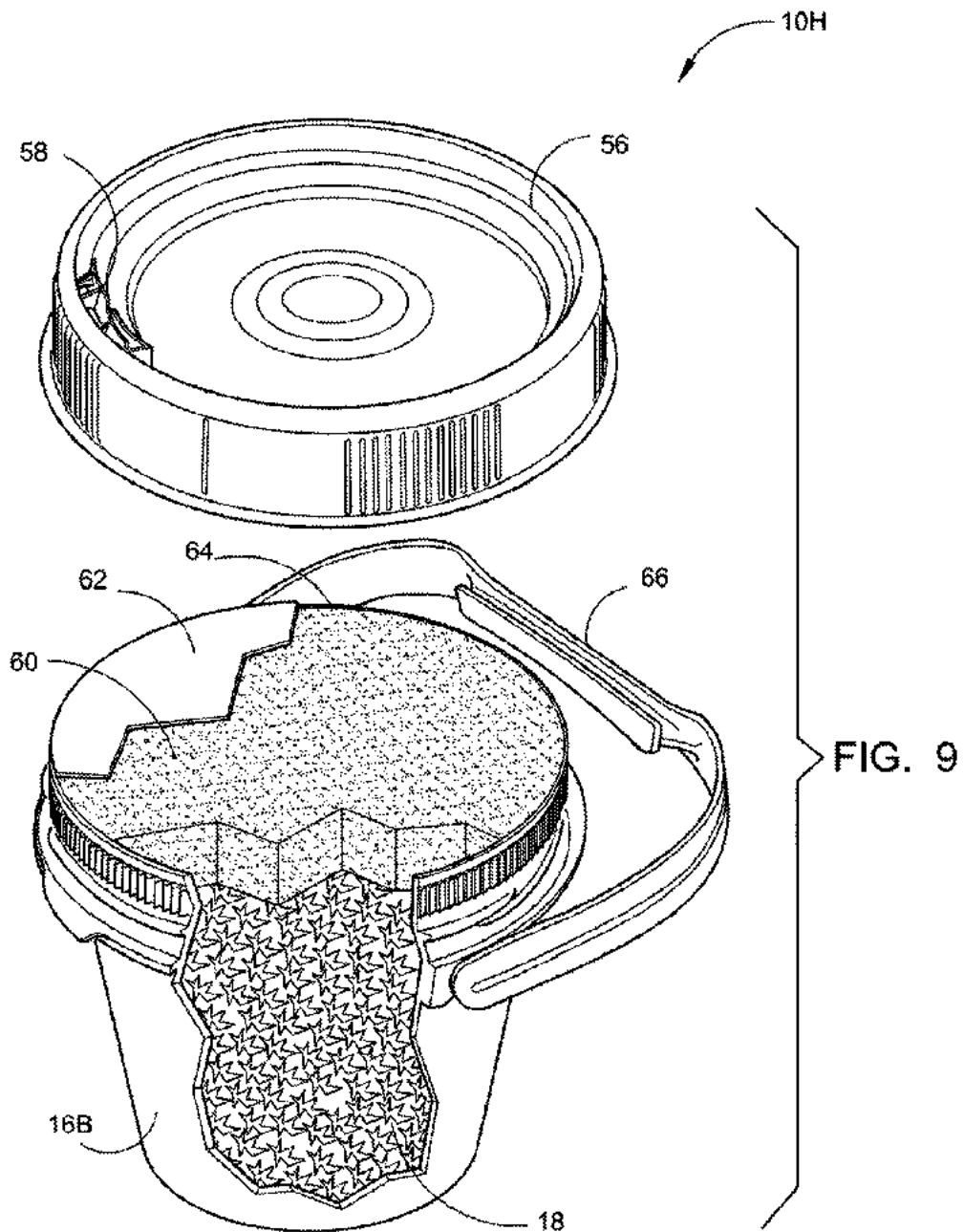
FIG. 8

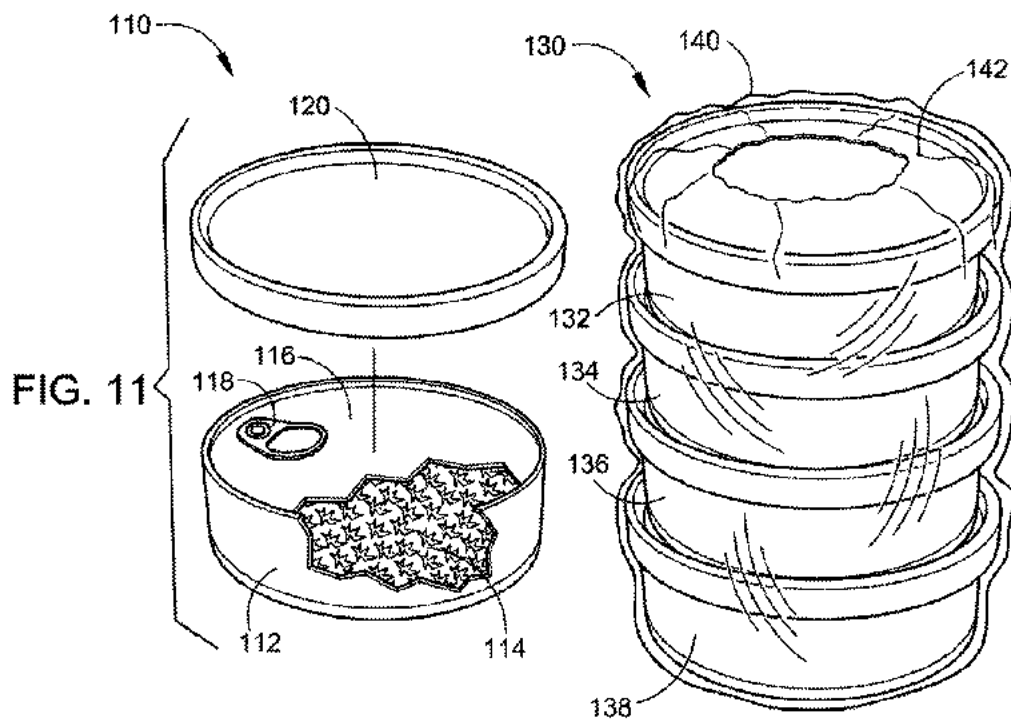
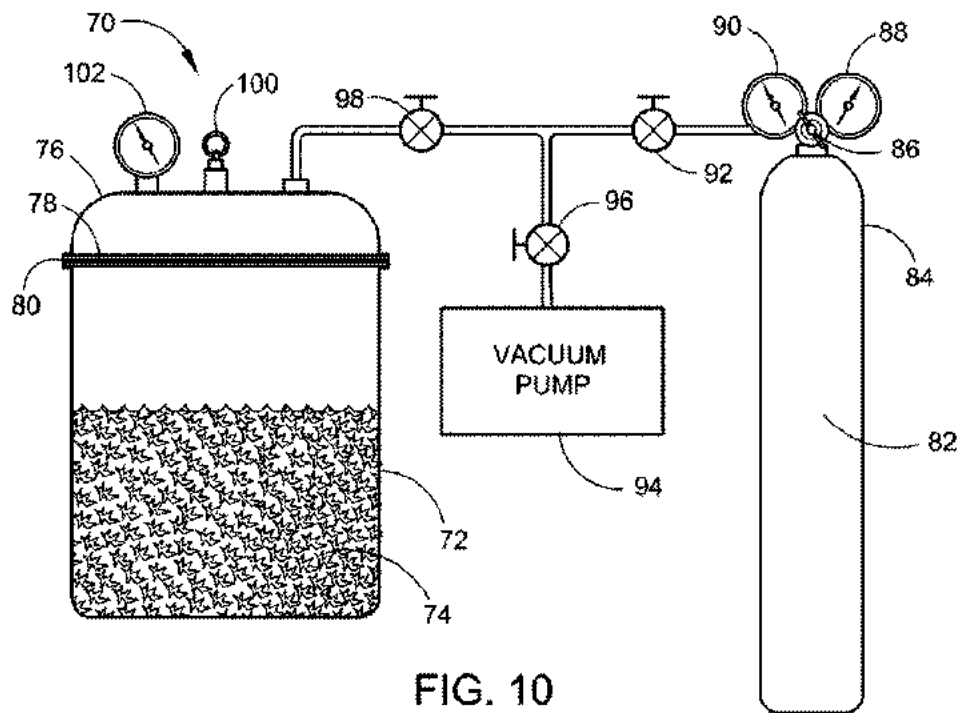
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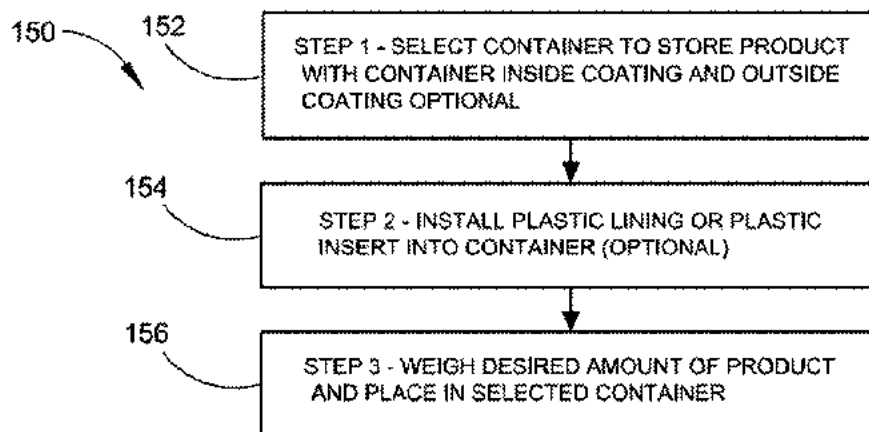


FIG. 13

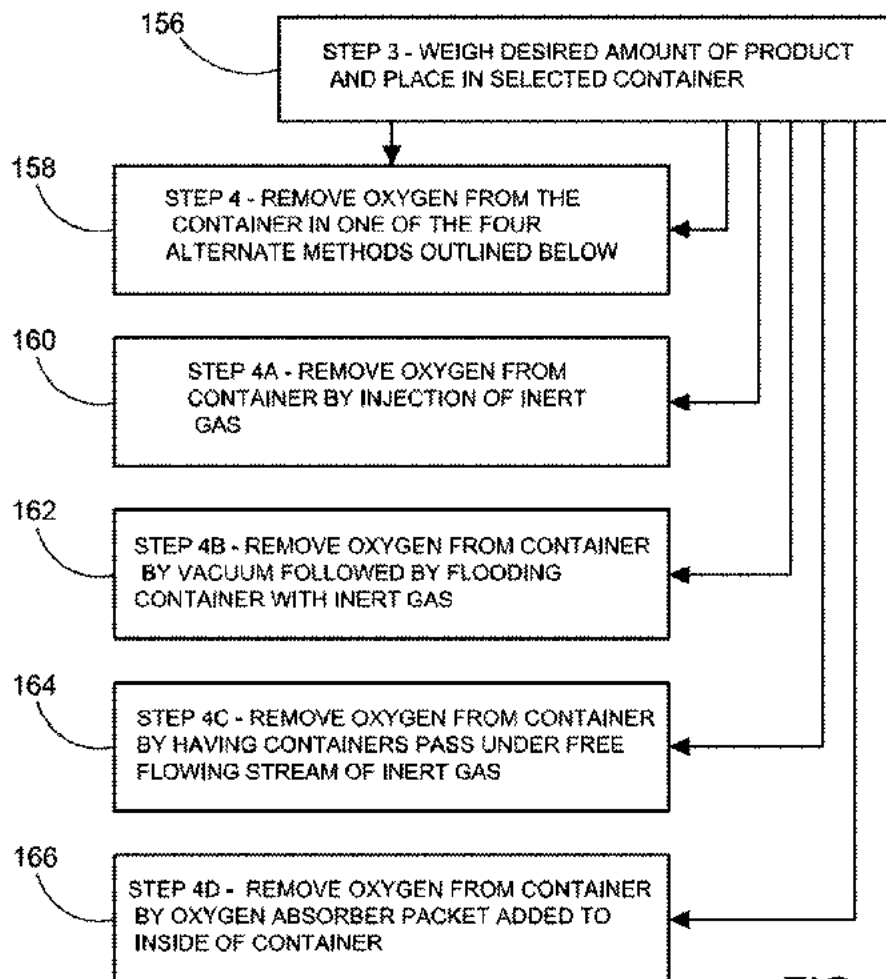


FIG. 14

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CONTAINER FOR THE STORAGE, PRESERVATION, IDENTIFICATION, TRACKING AND TRANSPORT OF A FEDERALLY CONTROLLED SUBSTANCE

This is a CIP of application Ser. No. 13/233,931, filed on Sep. 15, 2011, now U.S. Pat. No. 8,863,947.

FIELD OF THE INVENTION

This application provides a unique container for storing, preserving, identifying, tracking and transporting a federally controlled substance and a canning process for federally controlled substances where the cans enamel lined, atmosphere evacuated, inert gas filled, and hermetically sealed, and the federally controlled substance contents are clearly identified in a number of different ways. In particular, the federally controlled substance containers are optimized for long term storage and can be readily detected, tracked and traced when filled with a federally controlled substance.

A controlled substance is generally a drug or chemical whose manufacture, possession, or use is regulated by a government. Controlled substances are substances that are the subject of legislative control. This may include illegal drugs and prescription medications. In the United States for example, the Controlled Substances Act (or CSA) was passed by the 91st US Congress as Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970 and signed into law by President Richard Nixon. The CSA is the federal US drug policy under which the manufacture, importation, possession, use and distribution of controlled substances is regulated. In the US, the Drug Enforcement Administration (DEA) is responsible for suppressing illegal drug use and distribution by enforcing the Controlled Substances Act.

Section 812 of the Controlled Substances Act (21 U.S.C. §801 et seq.) (CSA) lists substances which were controlled in 1970 when the law was enacted. Since then, approximately 160 substances have been added, removed, or transferred from one schedule to another. The current official list of controlled substances can be found in section 1308 of the most recent issue of Title 21 Code of Federal Regulations (CFR) Part 1300 to end (21 CFR §1308) and the final rules which were published in the Federal Register subsequent to the issuance of the CFR. The Appendix attached to this patent application is a full listing of all of the federally Controlled Substances defined by the DEA, as of September 2014.

This list describes the basic or parent chemical and do not describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may be controlled substances. These lists are intended as general references and are not comprehensive listings of all controlled substances. Please note that a substance need not be listed as a controlled substance to be treated as a Schedule I substance for criminal prosecution. A controlled substance analogue is a substance which is intended for human consumption and is structurally or pharmacologically substantially similar to or is represented as being similar to a Schedule I or Schedule II substance and is not an approved medication in the United States. (See 21 U.S.C. §802(32)(A) for the definition of a controlled substance analogue and 21 U.S.C. §813 for the schedule).

Drugs, substances, and certain chemicals used to make drugs are classified into five (5) distinct categories or schedules depending upon the drug's acceptable medical use and the drug's abuse or dependency potential. The abuse rate is a determinate factor in the scheduling of the drug for

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example, Schedule I drugs are considered the most dangerous class of drugs with a high potential for abuse and potentially severe psychological and/or physical dependence. As the drug schedule changes—Schedule II, Schedule III, etc., so does the abuse potential—Schedule V drugs represents the least potential for abuse. A Listing of drugs and their schedule are located at Controlled Substance Act (CSA) Scheduling or CSA Scheduling by Alphabetical Order. These lists describe the basic or parent chemical and do not necessarily describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may also be classified as controlled substances. These lists are intended as general references and are not comprehensive listings of all controlled substances.

Note that a substance need not be listed as a controlled substance to be treated as a Schedule I substance for criminal prosecution. A controlled substance analogue is a substance which is intended for human consumption and is structurally or pharmacologically substantially similar to or is represented as being similar to a Schedule I or Schedule II substance and is not an approved medication in the United States. (See 21 U.S.C. §802(32)(A) for the definition of a controlled substance analogue and 21 U.S.C. §813 for the schedule).

Schedule I

Schedule I drugs, substances, or chemicals are defined as drugs with no currently accepted medical use and a high potential for abuse. Schedule I drugs are the most dangerous drugs of all the drug schedules with potentially severe psychological or physical dependence. Some examples of Schedule I drugs are: heroin, lysergic acid diethylamide (LSD), marijuana (cannabis), 3,4-methylenedioxymethamphetamine (ecstasy), methaqualone and peyote.

Schedule II

Schedule II drugs, substances, or chemicals are defined as drugs with a high potential for abuse, less abuse potential than Schedule I drugs, with use potentially leading to severe psychological or physical dependence. These drugs are also considered dangerous. Some examples of Schedule II drugs are: cocaine, methamphetamine, methadone, hydromorphone (Dilaudid), meperidine (Demerol), oxycodone (Oxy-Contin), fentanyl, Dexedrine, Adderall, and Ritalin.

Schedule III

Schedule III drugs, substances, or chemicals are defined as drugs with a moderate to low potential for physical and psychological dependence. Schedule III drugs abuse potential is less than Schedule I and Schedule II drugs but more than Schedule IV. Some examples of Schedule III drugs are: Combination products with less than 15 milligrams of hydrocodone per dosage unit (Vicodin), Products containing less than 90 milligrams of codeine per dosage unit (Tylenol with codeine), ketamine, anabolic steroids, and testosterone.

Schedule IV

Schedule IV drugs, substances, or chemicals are defined as drugs with a low potential for abuse and low risk of dependence. Some examples of Schedule IV drugs are: Xanax, Soma, Darvon, Darvocet, Valium, Ativan, Talwin, and Ambien.

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Schedule V

Schedule V drugs, substances, or chemicals are defined as drugs with lower potential for abuse than Schedule IV and consist of preparations containing limited quantities of certain narcotics. Schedule V drugs are generally used for antidiarrheal, antitussive, and analgesic purposes. Some examples of Schedule V drugs are: cough preparations with less than 200 milligrams of codeine or per 100 milliliters (Robitussin AC), Lomotil, Motofen, Lydon, and Parepectolin.

The transport and sales of federally controlled substances, hereinafter simply referred to as "controlled substances," has generally in the past been handled through pharmaceutical suppliers but with several states looking at the legalized sales of products like Marijuana there is a great need to identify, control, track and document these sales.

Containers carrying controlled substances should be readily identifiable both by sight and odor. Dogs are often used to locate these items, but if they are sealed where the air and moisture in the container is replaced with an inert gas along with a dehumidifying agents before sealing, dogs might not be able to locate these items. Identifying odor materials can be attached directly to the outside of the container or to the label. There are other various ways to identify these containers like colorization of the containers and their labels, bar coding and microchips either on the inside or affixed to the outside.

Problems will definitely arise from the transport of these materials from a state that legalizes it to a state where its possession is still illegal. Clearly identifying these containers will help to alleviate some of these problems. If states that legalize the sales of controlled substances like Marijuana would stipulate that it is only to be sold in an identifiable sealed container, there could be a greater control of its propagation, sales and the state taxes paid. With the legalization and controlled sales, the price would come down so that it would not be profitable for the illegal growing of the products.

Numerous innovations for pharmaceutical products have been provided in the prior art that are described as follows. Even though these innovations may be suitable for the specific individual purposes to which they address, they differ from the present design as hereinafter contrasted. The following is a summary of those prior art patents most relevant to this application at hand; as well as a description outlining the difference between the features of the canning process of controlled substances and the prior art.

U.S. Pat. No. 5,135,144 of David C. Blakley describes a belt worn and readily portable medical supply pouch for holding a supply of drug containers in a temperature stable and contamination resistant environment is disclosed. A substantially rectangular housing fabricated from a thick insulating material comprising a bottom, two side panels, a front and a back panel with an open top. A housing thus formed defines a cavity therein for storing a supply of drug cartridges. A protective panel extending across the opening of the housing and angled downward into the cavity is provided to prevent contamination from entering the cavity, while providing access by the hand of a user through the opening and down into the cavity for retrieving one of the drug containers. The housing is covered inside and out by a water-proof and contamination-resistant nylon material. Two belt loop members are affixed to the back panel of the housing for attaching the pouch to the waist belt of a user. An internal pocket inside the cavity of the housing is provided for containing a heating element for heating the

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interior cavity. An outside auxiliary pocket is attached to the outside surface of the front panel for storing items not requiring an insulated and contamination free environment.

This patent describes a belt worn and readily portable medical supply pouch for holding a supply of drug containers. It does not describe a single sealed container for a controlled substance like Marijuana.

U.S. Pat. No. 5,836,474 Georan Wessberg tells of an invention that relates to a medicament storage device which includes a storage plate having a plurality of storage spaces for storing quantities, such as medicament dosages and a base unit which has a memory and an alarm function. The device is characterized in that the openings of respective storage spaces are provided with a closure means in the form of a long and a short flap which overlap one another and which are either spring mounted or consist of elastic material. The flap overlap regions include indicating means which illustrate in which direction passage has occurred through the opening and/or with detecting means which produce a signal relating to the direction of the last passage through the opening.

This patent tells of an invention that relates to a medication storage device which includes a storage plate having a plurality of storage spaces for storing quantities, such as medicament dosages. It again does not describe a single sealed container for a controlled substance like Marijuana.

U.S. Pat. No. 5,866,219 of Paul McClure et al relates to a product information label system having a base member and a foldout medical information pamphlet which is applied to medicinal and drug containers where the foldout pamphlet is resealable for subsequent use.

This patent relates to a product information label system and does not deal with any form of containment means.

U.S. Pat. No. 6,793,081 Jay S. Denman describes a locking neck ring device that is placed over a capped bottle or container and grips the bottle neck ring, and together with a padlock or other securing means, prevents access to the bottle cap. The locking device comprises a clamp member that jackets a capped bottle neck; a cover which fits over the clamp member causing it to clamp on to the neck below the neck ring, and means to hold the clamp member to the cover. Provision is made for attaching a padlock or other securing means which holds the locking ring device in place. The bottle or container cap can then not be accessed for removal. The device is applicable to all sizes of drug containers, wine and liquor bottles for effectively locking access to the container contents.

This patent describes a locking neck ring device that is placed over a capped bottle or container and grips the bottle neck ring. It does not with any specific containment means.

None of these previous efforts, however, provides the benefits attendant with the process of canning a controlled substance and do not mention the use of an inert gas as a means of providing long-term storage. The present process of canning a controlled substance achieves its intended purposes, objects and advantages over the prior art through a new useful and unobvious combination of method steps and component elements at a reasonable cost and by employing readily available materials.

In this respect, before explaining at least one embodiment of the canning a controlled substance in detail it is to be understood that the process is not limited to just a specific process set forth in the following description or illustrated in the drawings. The canning process of controlled substances is capable of having other embodiments and of being applied in various ways. In addition, it is to be understood that the phraseology and terminology employed herein are for the

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purpose of description and should not be regarded as limiting. As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for creating other processes for carrying out the several purposes of the present application. It is important, therefore, that the claims be regarded as including such equivalent construction insofar as they do not depart from the spirit and scope of the present application.

SUMMARY OF THE INVENTION

The principal advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is to control the identification, movement and tracking of the federally controlled substance products.

Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is to control the propagation and processing of the federally controlled substance products.

Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is to control the sale and collection of sales taxes from the sale of the federally controlled substance products.

Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is the option of the removal of the oxygen and moisture while keeping the substance stored in an inert gaseous atmosphere.

Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that with an external odor substance, dogs will be able to locate it.

Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that they can have a micro-chip on the inside or outside for product locating.

Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that they can have a bar code on the outside for product identification.

Another advantage in the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that a variety of different packing and dehumidifying materials can be used, including formed rice cakes.

Another advantage is when formed rice cakes are used in the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance as a packing and dehumidifying agent, they can be readily and easily disposed of and are recyclable eco-friendly materials.

Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that an inexpensive form container can be made in different sizes and shapes, including cans, plastic pails, etc.

Yet another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is it can use a variety of different inert gases in the manufacturing process if desired, including nitrogen, etc.

These together with other advantages in the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance, along with

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the various features of novelty, which characterize the process, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance and its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred and alternate embodiments of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance. There has thus been outlined, rather broadly, the more important features of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance that will be described hereinafter and which will form the subject matter of the claims appended hereto.

The preferred embodiment of container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance will be placing the controlled substance into the preformed metal container with an enameled surface on the inside and outside. The process will begin by inserting a packing and dehumidifying agent, preferably a formed rice cake. If a microchip is desired within the container it is put in before inserting the controlled substance. The controlled substance is then inserted with a second preformed rice cake on the top. In some cases the rice cakes will be eliminated or just a single rice cake will be used on the top or the bottom. All of the different configurations of containing the controlled substance with rice cakes will be covered within the scope of this application.

If the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance in an inert atmosphere is desired the container is placed into a vacuum chamber. The chamber doors are closed and a vacuum of approximately 26-29 inches of mercury is drawn on the chamber. This removes all of the atmosphere/oxygen and atmospheric moisture that may be present. The vacuum is then halted and the chamber is then flooded with gaseous nitrogen. The gas is inert and dry, creating a benign atmosphere inside the container and around the controlled substance. This dry, inert environment now created inside the container will halt the degradation of the controlled substance. The shelf life/storage time created by this process should give the controlled substance stored inside the container almost an unlimited life regardless of the environment outside the container. This application is not limited to gaseous nitrogen. Alternate methods can include liquid nitrogen, oxygen absorbers along with other inert gases such as carbon dioxide, helium, and argon. Any process used to create an inert/benign atmosphere while canning the controlled substances will be covered within the scope of this application.

After the evacuation/flooding process is complete the chamber doors are opened and the container, filled with nitrogen, is pushed out and immediately put through the conventional canning process. The nitrogen gas that is in the container at this time is very heavy, dense, and cold and is not naturally trying to diffuse into the air in the room allowing for a reasonable amount of time to apply a lid and

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seal the container. An alternate method of packaging would be to put the prepackaged controlled substance in a sealable plastic bag filled with nitrogen and place it within the container.

After the container has been sealed in the conventional pop-top canning procedure an identifying scent substance is permanently adhered to the can or label. If an external microchip is desired it can be adhered to the outside of the can or be incorporated into a plastic removable locking ring around the top of the can. The label can also have an identifying bar code imprinted on it or the bar code can be printed on the can.

An alternate embodiment of the of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance would be the use of a polymer round pail type of container having a lid that screws on with a ratcheting locking mechanism and an O-ring seal. Once the polymer round pail has been filled, a cushioning and dehumidifying element such as a formed rice cake is placed on top of the substance. If the process of storing the controlled substance in an inert atmosphere is desired it is that placed into a vacuum chamber. The chamber doors are closed and a vacuum of approximately 26-29 inches of mercury is drawn on the chamber removing all of the atmosphere/oxygen and atmospheric moisture that may be present. The vacuum is then halted and the chamber is then flooded with gaseous nitrogen. The gas is inert and dry, creating a benign atmosphere inside the container and around the product. This dry, inert environment now created inside the container will halt degradation of the controlled substance. This application is not limited to gaseous nitrogen. Alternate methods can include liquid nitrogen, oxygen absorbers along with other inert gases such as carbon dioxide, helium, and argon. Any process used to create an inert/benign atmosphere inside the container will be covered within the scope of this application. Additional sealing will include a foil membrane attached over the top edge of the container with an O-ring in the lid making the final sealing means.

Additionally, a stand-alone container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is disclosed herein for the storage and preservation of marijuana "trim" while it is collected and before it is processed to extract the active compound Tetrahydrocannabinols or THC. When Marijuana is propagated the plants are often trimmed resulting in cuttings (scraps) of Marijuana plants known as "trim." In this embodiment, a container is used having an openable/closeable lid and the container is in communication with a vacuum pump and a nitrogen (or other inert gas) compressed tank storage. The "trim" is collected each day then stored in the specialized container under a vacuum and/or after being flooded with inert gas. This keeps the trim fresh over the relatively long collection times before processing the trim to extract the THC therein.

Furthermore, in the process of canning the controlled substances for maximized preservation the oxygen is removed from the container during the process in one of four ways: (1) injection into the container of inert gas before sealing the container; (2) flooding the container with inert gas before sealing the container; (3) passing the container under a free flowing stream of inert gas before sealing the container; and (4) addition of an oxygen absorber packet into the container before sealing the container.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of this application, to include variations in size, mate-

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rials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art. All equivalent relationships to those illustrated in the drawings and described in the specification intend to be encompassed by the present disclosure. Therefore, the foregoing is considered as illustrative only of the principles of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the design to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of this application.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and form a part of this specification, illustrate embodiments of the process of canning a controlled substance and together with the description, serve to explain the principles of this application.

FIG. 1 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating a microchip on the preformed rice cake on the bottom of the can with the controlled substance between a second preformed rice cake with the plastic lid raised above.

FIG. 2 depicts a perspective view of a preformed rice cake.

FIG. 3 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the container completely filled with the controlled substance with the plastic lid raised above.

FIG. 4 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the controlled substance on the bottom of the container with a preformed rice cake on top with a barcode on the label and the plastic lid raised above.

FIG. 5 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the controlled substance on the bottom of the container with a preformed rice cake on top and the plastic lid raised above.

FIG. 6 depicts a perspective view of a tamper-resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container with the controlled substance in a sealed plastic bag.

FIG. 7 depicts a perspective view of a tamper-resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container with the plastic removable locking ring incorporating a microchip.

FIG. 8 depicts a cross section of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container with a crimped edge on the bottom as well as the top. It should be understood that a conventional three-part tin (metal) can could be used, with or without a pop-top feature. This means that if a conventional three-part can is

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used without a tamper-resistant easy open “pop-top” feature, then it would necessitate a can opener be used to open the can to make the contents accessible.

FIG. 9 depicts a perspective view of an alternate embodiment using a polymer round pail type of container having a lid that screws on with a ratcheting locking mechanism broken away illustrating the internal components.

FIG. 10 illustrates a stand-alone specialized container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is disclosed herein for the storage and preservation of marijuana “trim” while it is collected and before it is processed to extract the active compound Tetrahydrocannabinols or THC.

FIG. 11 depicts a single tamper resistant easy open container representing one of the containers removed from a shrink-wrapped four pack, wherein said four pack of tamper resistant easy open containers is shown in FIG. 12.

FIG. 12 depicts a four pack of single tamper resistant easy open containers meant for the storage, preservation, identification, tracking and transport of a federally controlled substance in small quantities, all being shrink-wrapped into one pack of four containers.

FIG. 13 illustrates a flow chart of the first three steps in the process for the storage, preservation, identification, tracking and transport of a federally controlled substance.

FIG. 14 illustrates a flow chart of the last two steps in the process for the storage, preservation, identification, tracking and transport of a federally controlled substance.

For a fuller understanding of the nature and advantages of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance, reference should be had to the following detailed description taken in conjunction with the accompanying drawings which are incorporated in and form a part of this specification, illustrate embodiments of the process together with the description, serve to explain the principles of this application.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, wherein similar parts of the process of canning a controlled substance is illustrated there is seen in FIG. 1 a perspective view of a conventional pop-top can assembly 10A cut away illustrating the internal microchip 12A on the lower preformed rice cake 14 at the bottom of the container 16A. The controlled substance 18 is between the upper preformed rice cake 20 and lower preformed rice cake 14 with the plastic lid 22 above the container 16A. The container 16A will consist of a conventional pressed formed metal can without a crimped edge on the container bottom edge 24. The container 16A will have a label 26 where an external odor substance 28A can be located, or the external odor substance 28B can be adhered to the outside surface of the container 16A. The process of storing the controlled substance in an inert atmosphere is optional at this time. A tamper resistant easy open lid 30, possibly configured in any of numerous configurations, here shown as a pop-top lid with an opening tab 32, which will be sealed to the container top edge 34 of container 16A.

FIG. 2 depicts a perspective view of a preformed rice cake 14, 20.

FIG. 3 depicts a perspective view of a tamper resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container 10B cut away illustrating the container

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completely filled with the controlled substance 18 with the plastic lid 22 above container 16A.

FIG. 4 depicts a perspective view of a tamper resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container 10C cut away illustrating the controlled substance 18 on the bottom of the container 16A with the upper preformed rice cake 20 with a barcode 40 on the label 26 and the plastic lid 22 above the container 16A.

FIG. 5 depicts a perspective view of a tamper resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container 100 cut away illustrating the controlled substance 18 on the bottom of the container 16A with the upper preformed rice cake 20 on top and the plastic lid 22 above the container 16A.

FIG. 6 depicts a perspective view of a tamper resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container 10E with the controlled substance 18 in a sealed plastic bag 42.

FIG. 7 depicts a perspective view of a tamper resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container 10F with the plastic removable locking ring 44 over the plastic lid 22 and the top edge 34 of the container 16A incorporating the external microchip 12B.

FIG. 8 depicts a cross section of a three part tamper resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container 10G with a crimped edge 46 on the container bottom edge 48 as well as the container top edge 34.

FIG. 9 depicts a perspective view of an alternate embodiment 1011 of the process of canning a controlled substance in bulk amounts using a polymer round pail type of container 16B having a lid 56 that screws on with a ratcheting locking mechanism 58. The polymer round pail 16B has been broken away illustrating the controlled substance 18 and the rice cake packing material 60. The process of storing the controlled substance in an inert atmosphere is optional at this time. A film seal 62 covers the top surface attached to the pail edge 64. The polymer round pail 16B has a pivoting handle 66. This polymer round pail container 16B would be used for bulk controlled substance storage and transport.

FIG. 10 illustrates a stand-alone specialized container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is disclosed herein for the storage and preservation of Marijuana “trim” while it is collected and before it is processed to extract the active compound Tetrahydrocannabinols or THC. This stand-alone Marijuana trim storage system 70 includes a main holding container vessel 72 within which the Marijuana trim 74 is placed for storage until processed. The main container vessel 72 is equipped with a lid 76 which mates with the lid accepting portion 78 of the main container 72 and a gasket 80 to enable secure sealing of the lid 76 to the main container vessel 72. The main container vessel 72 is in communication with an inert gas source 82, here a compressed inert gas cylinder 84. The inert gas cylinder 84 is equipped with a regulator 86 including two pressure gauges 88 and 90. When the inert gas exits the regulator it is controlled by an on/off valve 92 located between the compressed gas cylinder 84 and the main container vessel 72.

Furthermore, the main container vessel 72 is in communication with a vacuum pump 94 and there is an on/off valve

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96 in between the main container vessel 72 and the vacuum pump. Another on/off valve 98 is located before the vacuum pump 94 and the inert gas source 82 can communicate with the lid 76 of the main container. The lid also includes a pressure relief valve 100 and a vacuum gauge 102. The stand-alone Marijuana trim storage system 70 main container vessel 72 can be placed in a refrigeration unit or the main container vessel 72 can be equipped with refrigeration coils (not shown).

The storage and preservation of Marijuana trim is accomplished through this stand-alone Marijuana trim storage system 70. During the growing and harvesting of marijuana, the plant is "pruned" in the effort to enhance the "bud", the most desirable part of the plant. This pruning generates what is referred to as "Trim." When enough trim has been accumulated, it is then washed with solvents to liberate the THC that is in the leaves, the solvents are removed and liquid THC remains. This liquid is used in the baking of edible products (i.e. cookies, brownies, small cakes, etc.). The problem the industry has to combat is keeping the trim fresh until enough has been accumulated to make processing viable. The present stand-alone Marijuana trim storage system 70 for trim storage that consists of an airtight main container vessel 72 that can be opened easily, filled with trim, and then a vacuum is applied (26-28 inches of mercury) to boil off atmospheric moisture and remove the oxygen. After evacuation, the main container vessel 72 is then filled with dry, inert gas, preferably nitrogen. This process stabilizes and preserves the trim for processing. In addition, this vessel can be refrigerated to 36-40 degrees Fahrenheit to further slow degradation of the contents.

FIG. 11 depicts a single tamper resistant easy open container 112 representing one of the containers removed from a four pack, wherein said for pack of tamper resistant easy open containers is shown in FIG. 12. The single tamper resistant easy open container 112 has been filled with a federally controlled substance 114, and includes a tamper resistant easy open lid 116 (in this case showing a pop-top ring 118 for easy opening). A plastic removable lid 120 is also provided to replace the tamper resistant easy open lid 116 after it is removed to keep the contents fresh. The tamper resistant lid 116 including the pull top 118 lid is a tamper resistant safety feature. If the seal is breached, it can't be returned to its sealed condition giving the consumer a tell-tale indication that the product has possibly been tampered with or compromised. Child proof lids can be opened and returned to a sealed condition, not leaving a tell-tale sign, thus pilferage and possible compromised product will go undetected. A pull top lid is a one-time use only feature.

FIG. 12 depicts a four pack of single tamper resistant easy open containers 130 meant for the storage, preservation, identification, tracking and transport of a federally controlled substance in small quantities, all being shrink wrapped into one pack of four 130. Each of the four cans 132, 134, 136 and 138 is held tightly and securely together by plastic shrink wrapping 140. Each of the four cans 132, 134, 136 and 138 also includes a plastic lid 142.

Small quantity usage is pervasive in federally controlled substances of all kinds. Because of the varying availability of packaging sizes, consumers are able to only open and expose small amounts of product at a time, thus eliminating the exposure of the product inside to the elements. This allows the consumer to keep and store their products for longer periods of time instead of utilizing them in a shorter period of time because of the shorter shelf life of exposed product. For example, with Marijuana: An eighth of an ounce of marijuana fits neatly into a nitrogen packed con-

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tainer, which is approximately the same size as a typical container of chewing tobacco. A plastic over cap is applied to the containers. Four of these containers are stacked and held together by a plastic shrink sleeve 140. While the total amount of Marijuana in possession (in those US states which have legalized it) is currently 1/2 ounce, only a 1/8th ounce is exposed to the elements at any given time. The other 3/8th ounce is sealed and stored tightly in the remaining containers, and stays as fresh as when it was first introduced into the containers for storage and preservation. All containers come with a pull top tamper resistant lid 116 (as shown in FIG. 11) affixed.

FIG. 13 illustrates a flow chart of the first three steps in the process 150 for the storage, preservation, identification, tracking and transport of a federally controlled substance. Step 1 152 includes the proper size container is selected to store the marijuana, a container that fits the portion to be processed. The container can be a metal/tin can with a vinyl or enamel coating inside. A coated container is preferred. This coating will shield the product from coming in contact with the bare metal of the can and possibly reacting with the metal. The outside of the container could be coated with either a vinyl or an epoxy to prevent rust.

A plastic lined can is preferred, to include but not limited to a plastic lining or coating on the inside of the can to protect the product from coming in contact with bare metal/tin and causing a reaction, for example, transfer of a metallic taste to the product and/or having moist product coming in direct contact with any metal material.

Step 2 154 includes a plastic lining or insert can be installed, this coating or lining will shield against the product coming in contact with the bare metal of the can, and possibly reacting with the metal. Containers can also be made of composite material, (a composite can), a plastic can, a plastic pail or a plastic bucket.

Step 3 156 includes the product, (in this example, marijuana), is then weighed and placed in the can, or weighed in the can, (minus the tare weight of the can).

FIG. 14 illustrates a flow chart of the last two steps in the process 150 for the storage, preservation, identification, tracking and transport of a federally controlled substance. Here again, Step 3 156 includes the product, (marijuana), is then weighed and placed in the can, or weighed in the can, (minus the tare weight of the can). Following Step 3 156, Step 4 158 includes the can or container is now run through a process to remove the oxygen from the container. This is accomplished through the use of inert gases, to include but not limited to the insertion of liquid or gaseous inert gases, i.e. nitrogen, carbon dioxide, helium etc., to create a benign, dry, non-reactive atmosphere inside the can to stabilize and preserve the product.

This is achieved in one of four alternative method steps as described below;

Method Step 4A 160 includes removing the oxygen by having the can/container pass under a system that injects inert liquid gas (nitrogen preferred). The liquid is cold and dense. It immediately begins to gasify, thus displacing the atmospheric oxygen from the can/container. Before the gasification is complete, the can is sealed with a "pop top" lid and a seam is completed, leaving a nitrogen atmosphere inside the can/container.

This process can also be achieved by Step 4B 162 by placing the can, or cans, or containers, in a vacuum chamber, evacuating the chamber and then flooding the chamber with gaseous nitrogen or any inert gas, then quickly sealing (seaming) the cans before the colder dense gas warms and tries to escape.

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A third method of replacing the oxygen is shown in Step 4C 164 which is to allow the filled cans to pass under a free falling, free flowing stream of nitrogen as it travels to the machine to be lidded and sealed. In lieu of injecting a measured quantity of liquid nitrogen in to the can as it moves toward the lidded/seamer, it is now replaced with just passing under a falling stream of cold, dense nitrogen. This achieves an oxygen removal displacement. This method is effective but allows much of the nitrogen to be wasted in the surrounding area.

A fourth method, as illustrated in Step 4D 166 would be to place an oxygen absorber packet inside the can prior to lidding. This will turn the available oxygen inside the can into iron oxide, thus effectively removing the oxygen in the can/container.

In summary, there are four basic configurations in which the federally controlled substances could be canned, (1) canned loosely alone with no spacer or insert; (2) canned with only a top spacer or insert; (3) canned with both a top and bottom spacer or insert, and (4) canned pre-packaged in a sealed plastic bag or foil envelope. Finally, bulk amounts of controlled substances could be stored and transported in large sealed polymer pails, with and without spacers or inserts.

Furthermore, in summary, in the process of canning the federally controlled substances for long term storage and maximized preservation, the oxygen is removed from the container during the process in one of four ways: (1) injection into the container of inert gas before sealing the container; (2) flooding the container with inert gas before sealing the container; (3) passing the container under a free flowing stream of inert gas before sealing the container; and (4) addition of an oxygen absorber packet into the container before sealing the container.

Moreover, it is anticipated that many other federally controlled substances such as pharmaceuticals will be stored, preserved, identified, tracked and transported using the present invention and inventive method. This is to include but not limited to using the same process for other drugs, pills, powders, and liquids to stabilize and preserve, giving them a longer shelf life. (Some medications degrade rapidly in the presence of atmospheric moisture, oxygen, and light.) This process is to include possible refrigeration of the cans to slow degradation of the products inside, in some cases even freezing the canned product. In the case of marijuana, low temperatures are desirable, but freezing will harm the product.

In addition, the present invention is directed at solving problems in scent detection and/or scent suppression for containers of federally controlled substances. Depending on the desired situation, when properly filled, no marijuana is allowed to come in contact with the outside of the container, and when properly sealed, the product cannot be detected by drug-sniffing dogs. If detection is desired, the container simply needs to come in contact with the marijuana on the outside of the container. The scent lingers and drug sniffing dogs can detect/locate the product. Alternatively, the previously described label having an odor adhered portion can be employed to enhance the detection of the federally controlled substance contents within the container so labeled.

Further, the purpose of the foregoing abstract is to enable the US Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the

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invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

I claim:

1. A container for storage, preservation, identification, tracking and transport of a federally controlled substance comprising:

(a) a one or more piece airtight container having an outer portion having an exterior surface and an inner portion having an interior surface, an upper portion and a lower portion, configured for containing a federally controlled substance;

(b) an inner coating liner lining said inner portion interior surface of said airtight container;

(c) a one piece tamper resistant easy open lid affixed to said upper portion of said airtight container, wherein said easy open lid includes an inner surface and an outer surface, and further wherein said easy open lid inner surface includes an inner coating liner lining said inner surface; and

(d) identifying indicia located on the outer portion exterior surface of said airtight container, for identifying the contained federally controlled substance contents within said container, wherein said identifying indicia located on said outer portion exterior surface for identifying the contained federally controlled substance contents within said container includes a label having a portion where an external odor from a federally controlled substance is adhered;

wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated before said airtight container is hermetically sealed, containing a federally controlled substance inside said airtight hermetically sealed lined container in a preserving storage environment until said hermetically sealed airtight lined container is opened.

2. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said one or more piece airtight container includes a plastic coating lined metal container.

3. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said one or more piece airtight container includes a plastic lined composite container.

4. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said one piece tamper resistant easy open lid affixed to said airtight container includes a pop-top one piece tamper resistant easy open lid.

5. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said container comprises a polymer round pail and said one piece tamper resistant easy open lid affixed to said airtight container includes an airtight screw-on lid.

6. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said external odor from a federally controlled substance is adhered during the container controlled substance filling process, for the purpose of allowing federal agencies, drug-sniffing dogs, and others to detect the presence of the federally controlled substance contents contained therein.

7. The container for storage, preservation, identification, tracking and transport of a federally controlled substance

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according to claim 1, wherein said identifying indicia is located within said inner portion of said airtight container and comprises a microchip.

8. A method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, comprising the steps of:

- (a) providing a one or more piece airtight container having an outer portion having an exterior surface and an inner portion having an interior surface, an upper portion and a lower portion, configured for containing a federally controlled substance;
- (b) providing an inner coating liner lining said inner portion interior surface of said airtight container;
- (c) providing a one piece tamper resistant easy open lid affixed to said upper portion of said airtight container, wherein said easy open lid includes an inner surface and an outer surface, and further wherein said easy open lid inner surface includes an inner coating liner lining said inner surface; and
- (d) providing identifying indicia located on the outer portion exterior surface of said airtight container, for identifying the contained federally controlled substance contents within said container, wherein said identifying indicia located on said outer portion exterior surface for identifying the contained federally controlled substance contents within said container includes a label having a portion where an external odor from a federally controlled substance is adhered;

wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated before said airtight container is hermetically sealed, containing a federally controlled substance inside said airtight hermetically sealed lined container in a preserving storage environment until said hermetically sealed airtight lined container is opened.

9. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said one or more piece airtight container includes a plastic coating lined metal container.

10. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said one or more piece airtight container includes a plastic lined composite material container.

11. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said one piece tamper resistant easy open lid affixed to said airtight container includes a pop-top one piece tamper resistant easy open lid.

12. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said container comprises a polymer round pail and said one piece tamper resistant easy open lid affixed to said airtight container includes an airtight screw-on lid.

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13. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said external odor from a federally controlled substance is adhered during the container controlled substance filling process, for the purpose of allowing federal agencies, drug-sniffing dogs, and others to detect the presence of the federally controlled substance contents contained therein.

14. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said identifying indicia is located within said inner portion of said airtight container and comprises a microchip.

15. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside, further includes removing the oxygen from said airtight container by injection of inert gas prior to sealing said airtight container.

16. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside, further includes removing the oxygen from said airtight container by flooding said airtight container with inert gas prior to hermetically sealing said airtight container.

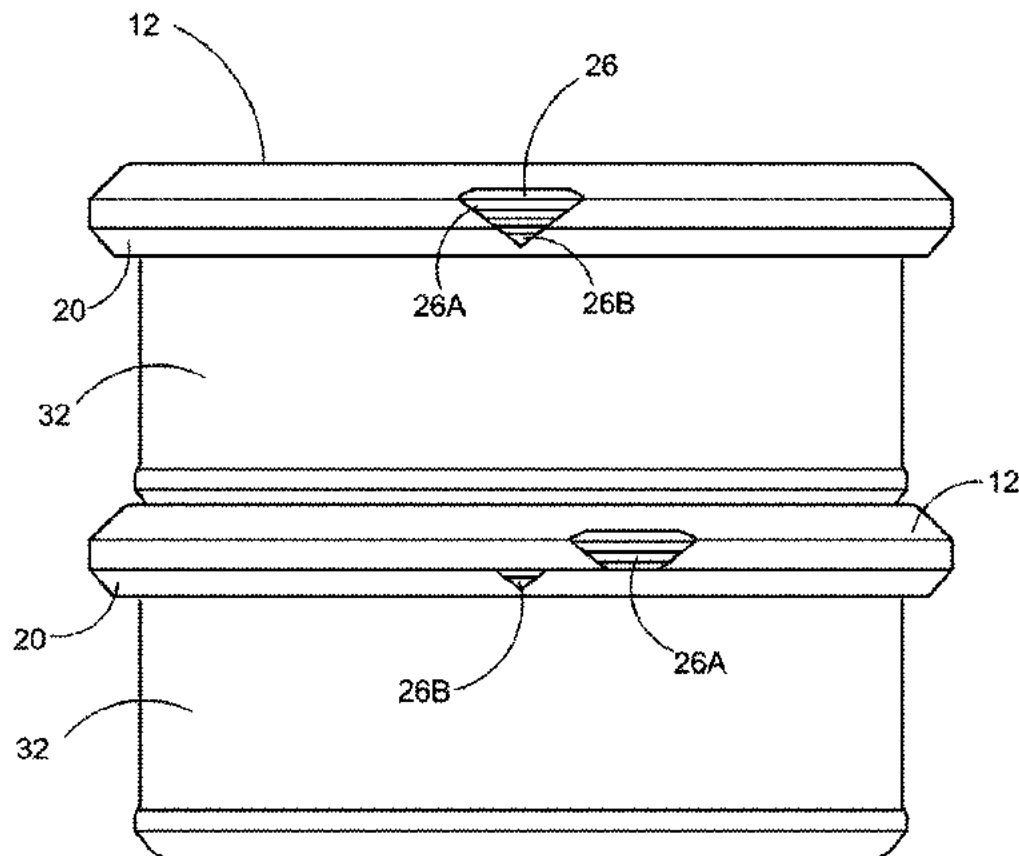
17. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside, further includes removing the oxygen from said airtight containers by having passing said containers under a free flowing stream of inert gas prior to hermetically sealing said airtight container.

18. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside, further includes removing the oxygen from said airtight container by inclusion of an oxygen absorber packet prior to hermetically sealing said airtight container.

* * * * *

EXHIBIT C

(43) **Pub. Date:** **Dec. 14, 2017**



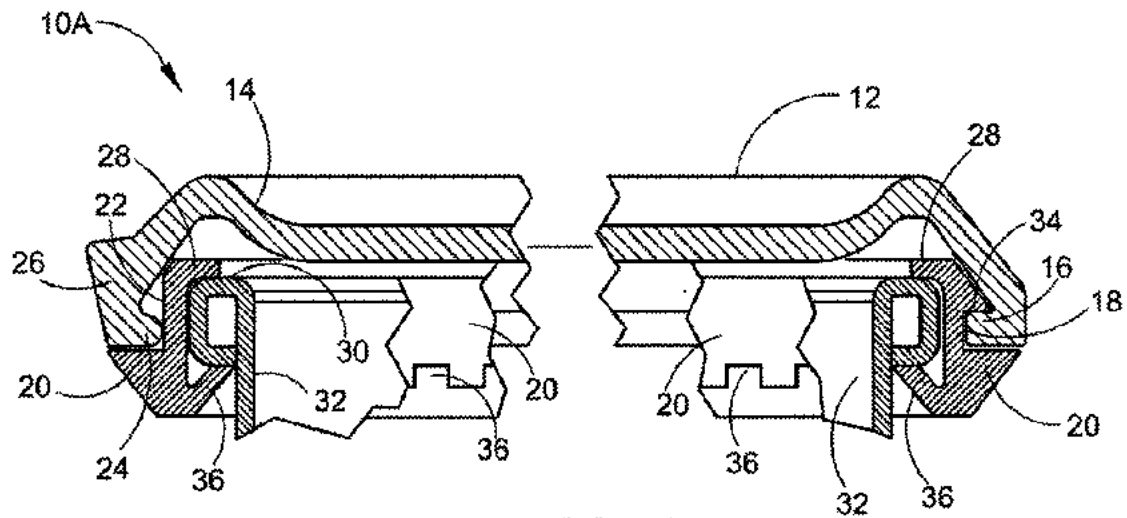


FIG. 1

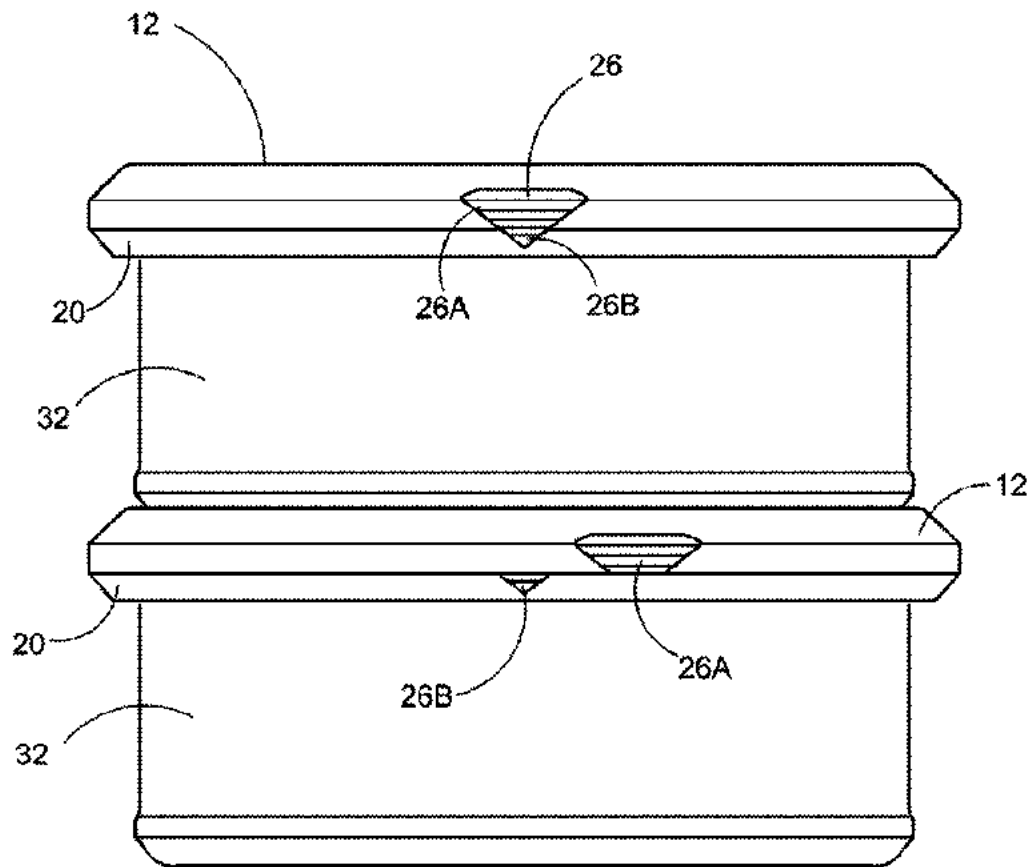
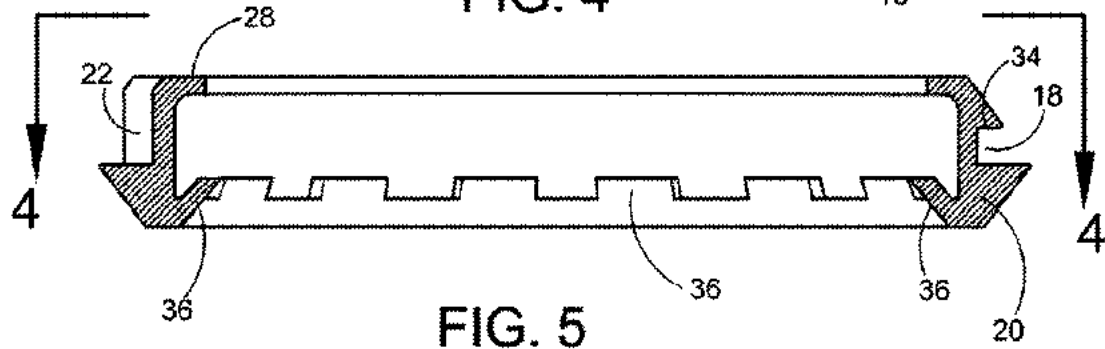
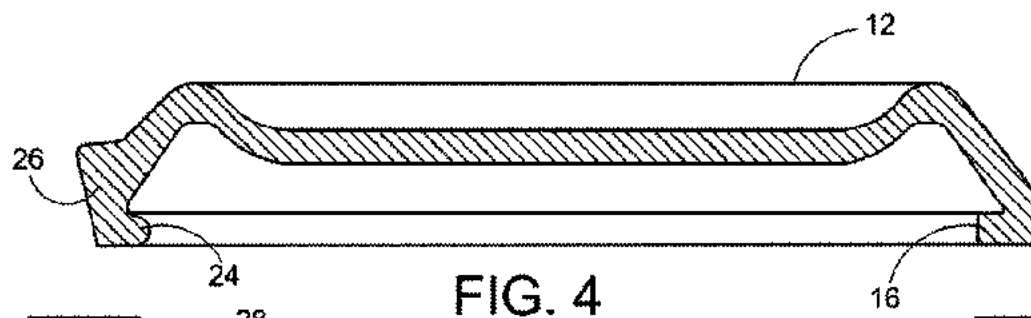
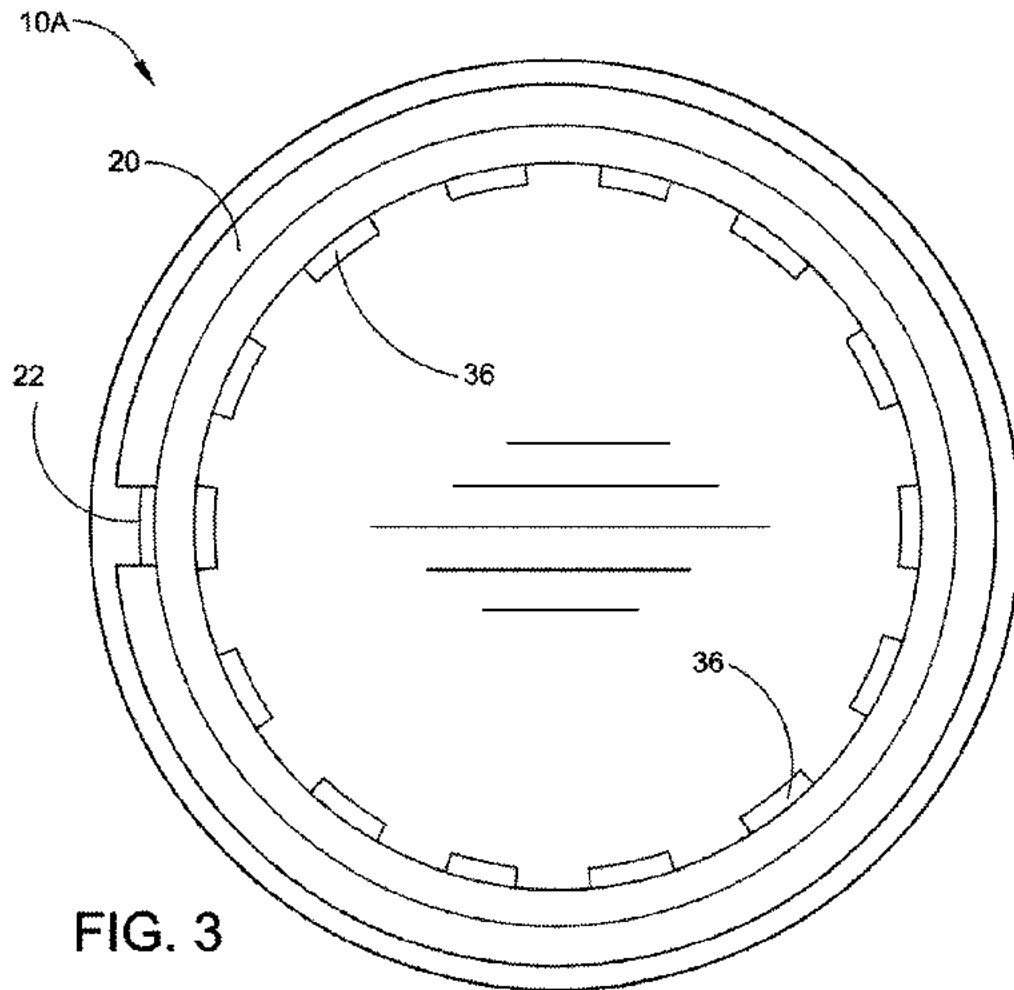
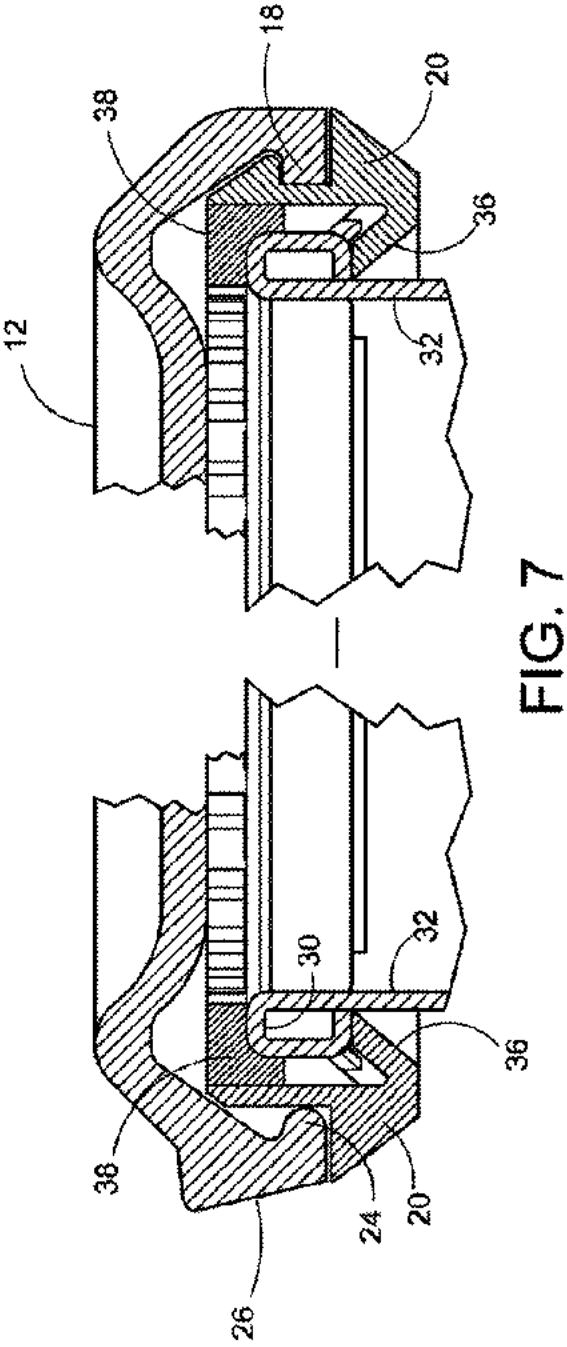
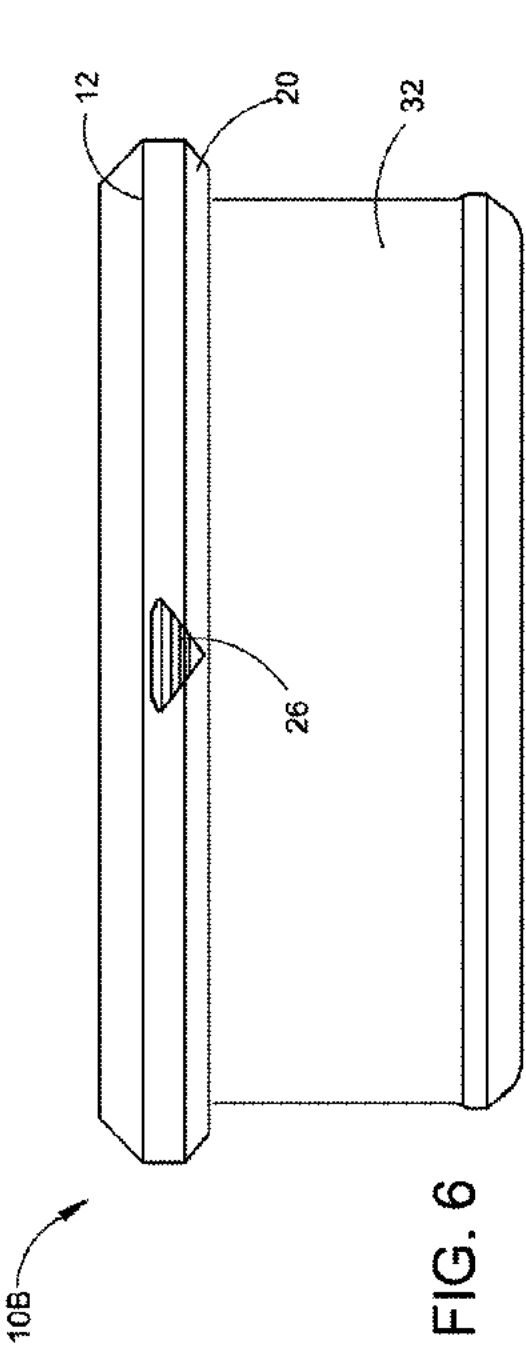
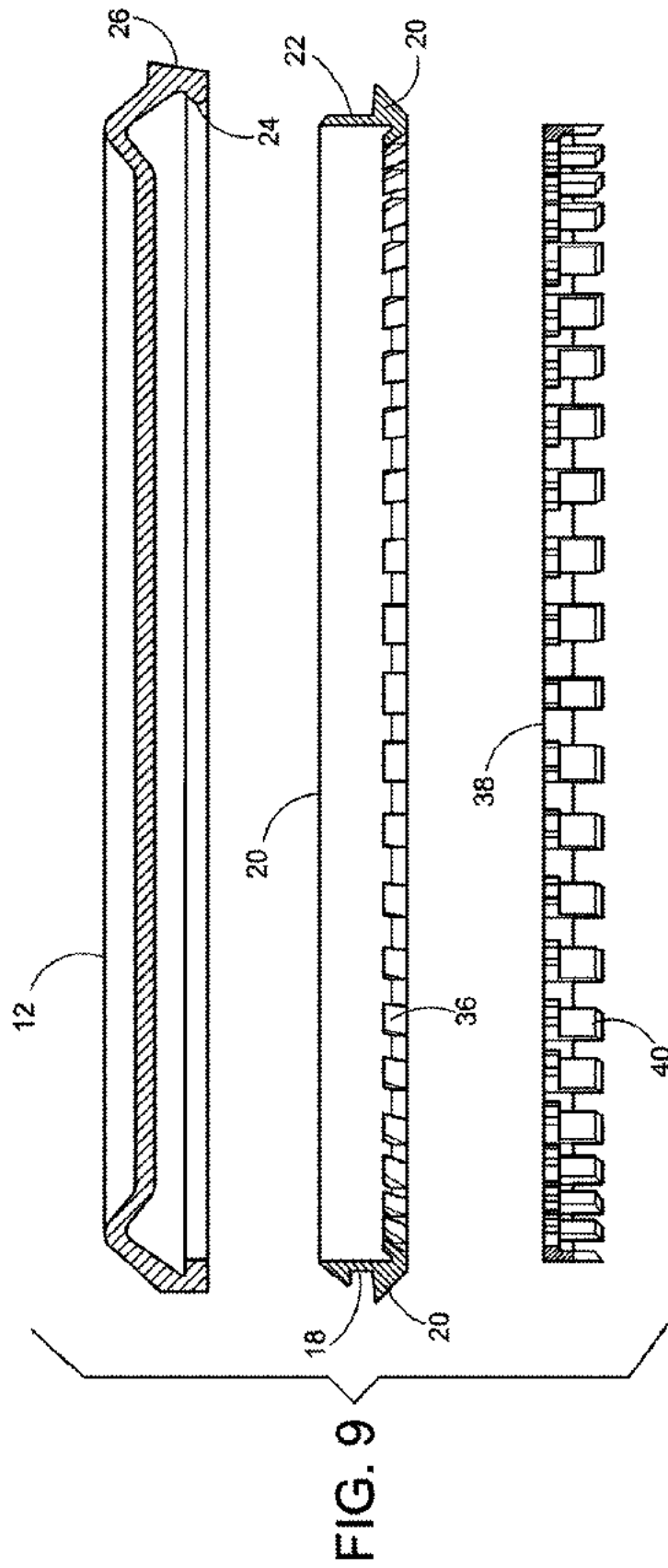
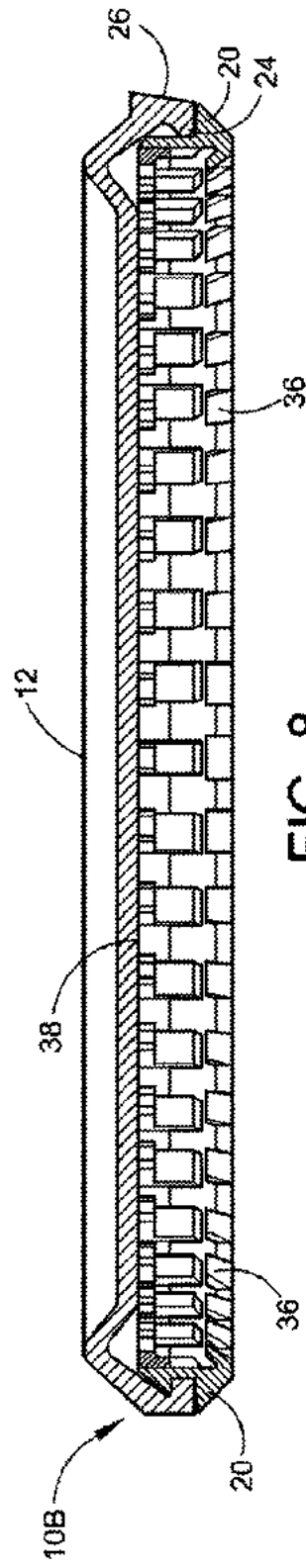


FIG. 2







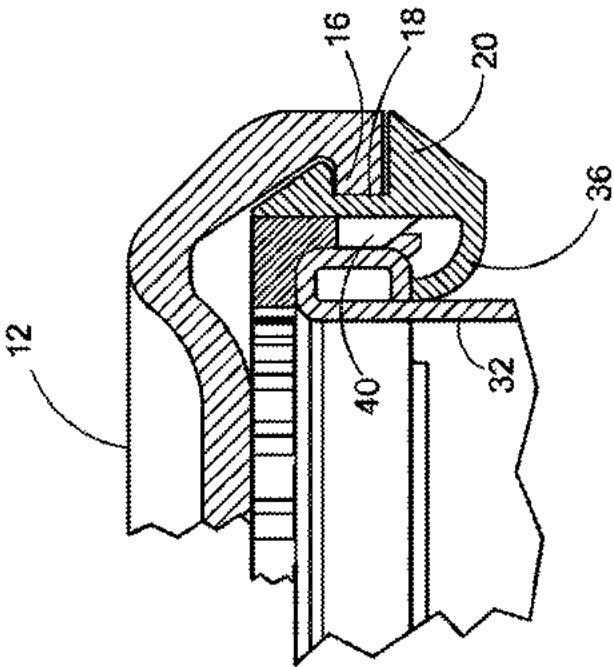


FIG. 11

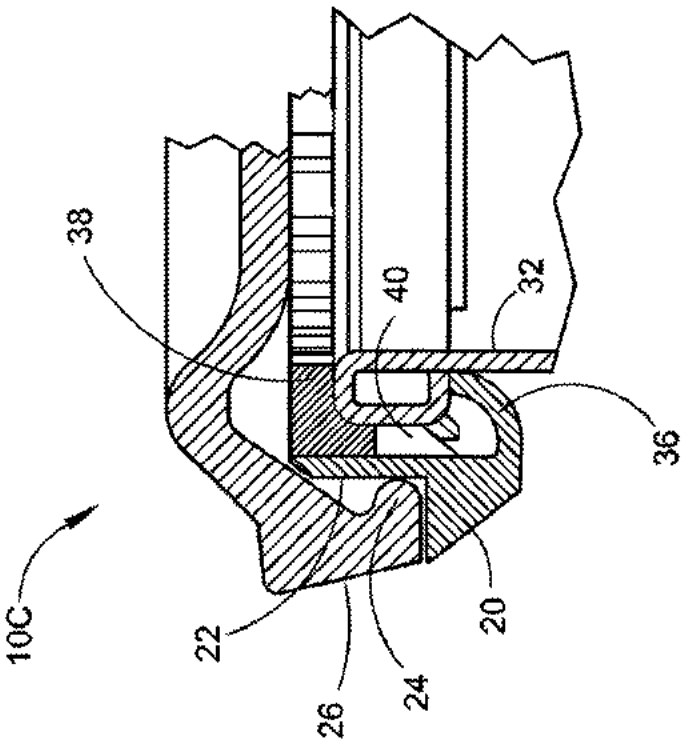
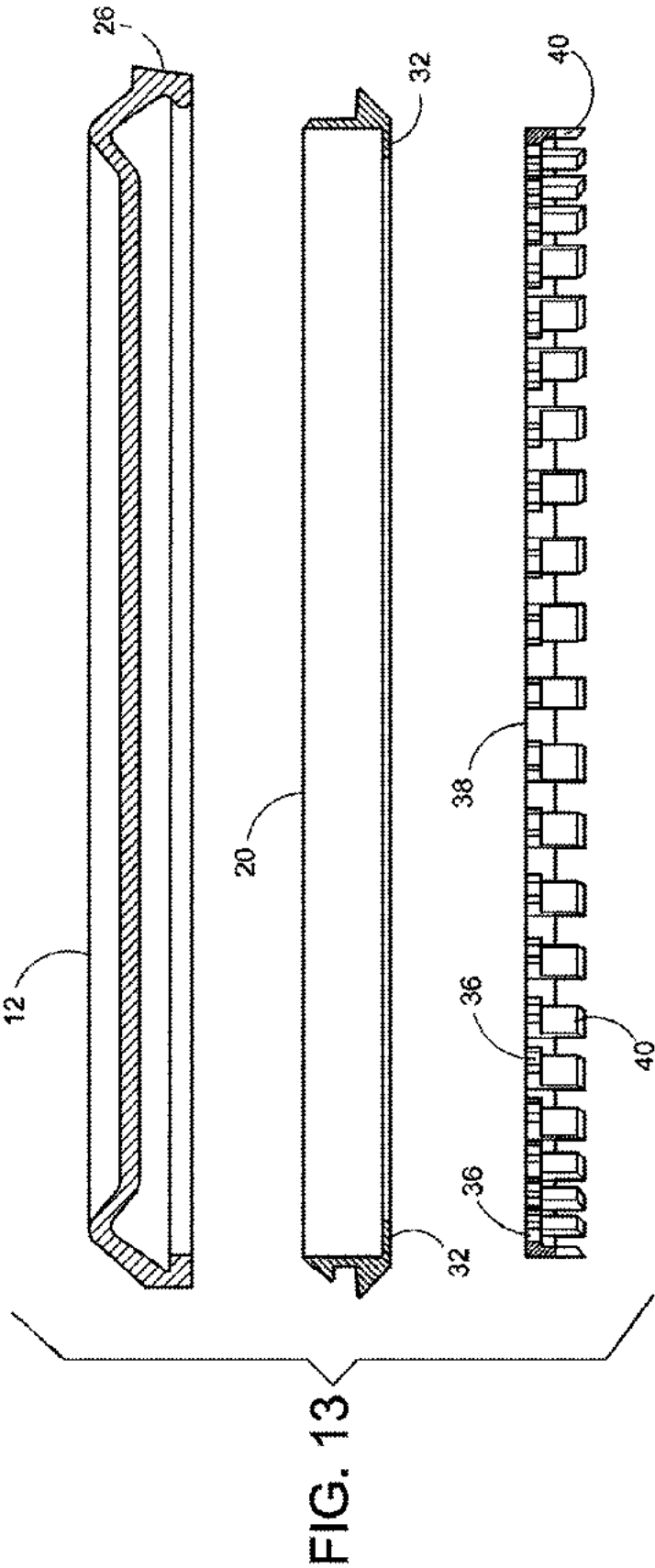
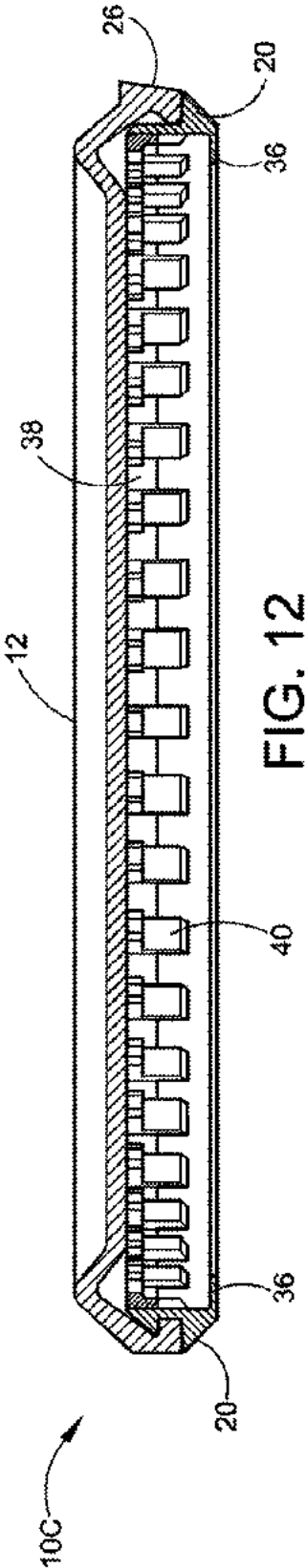


FIG. 10



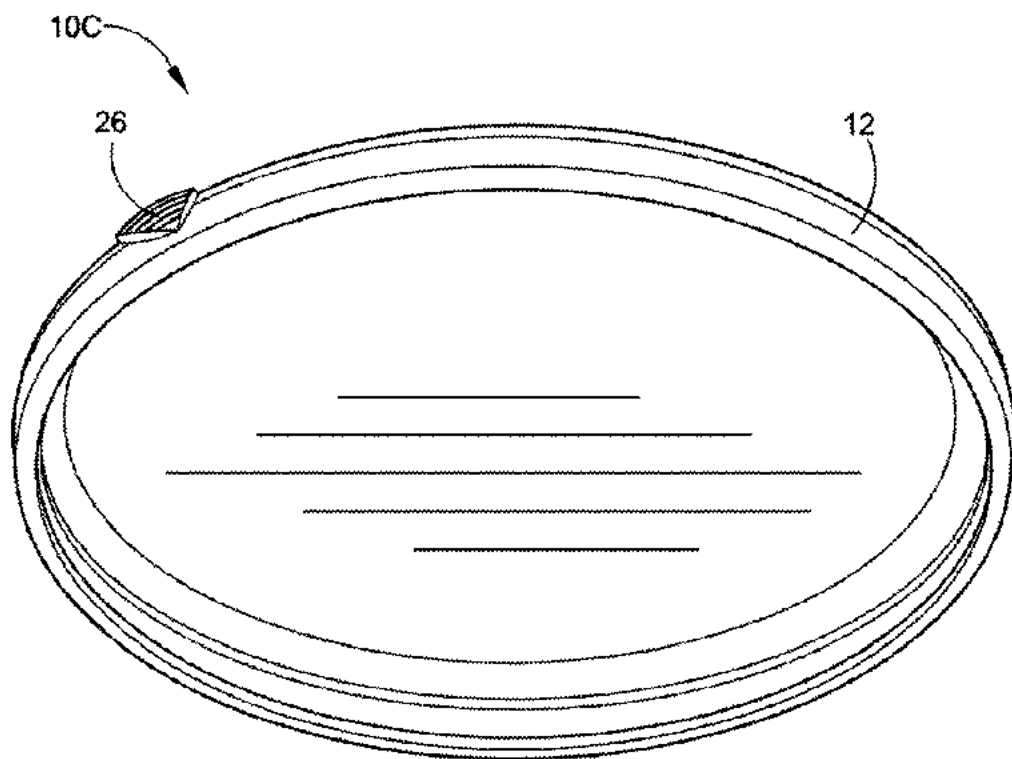


FIG. 14

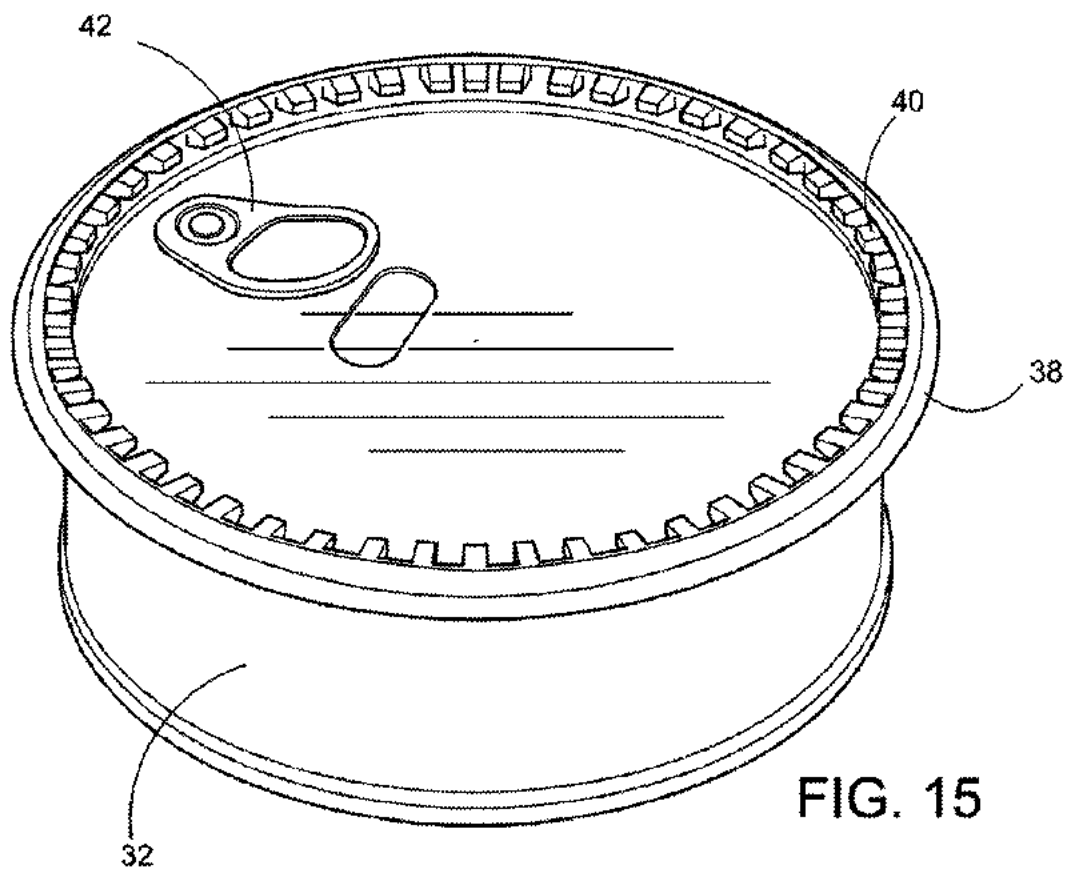
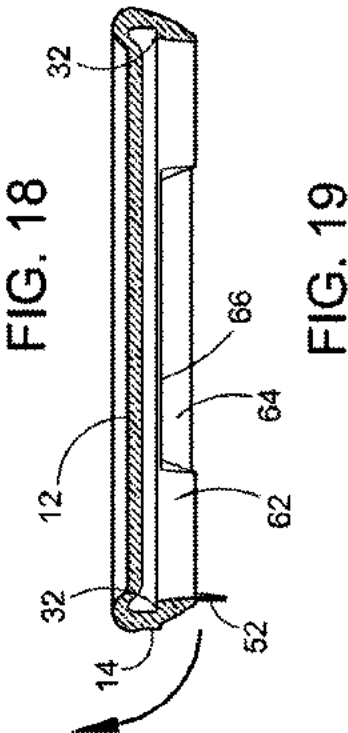
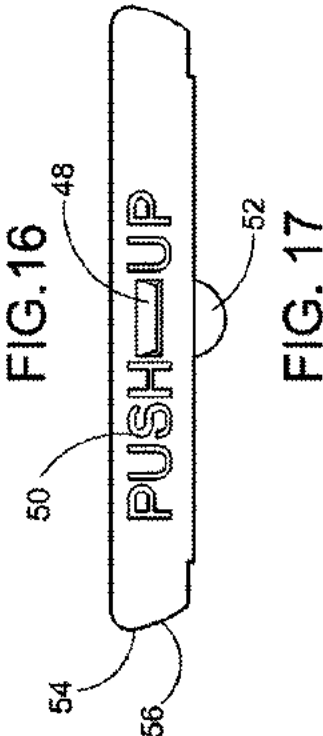
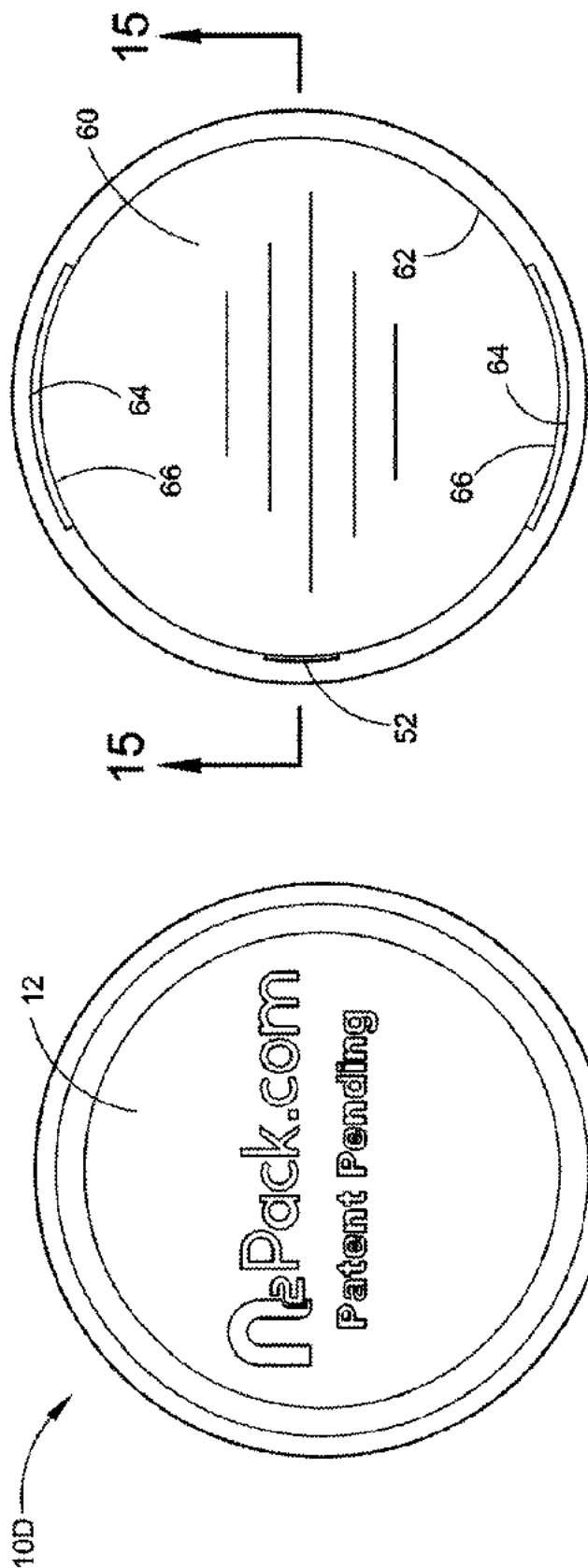


FIG. 15



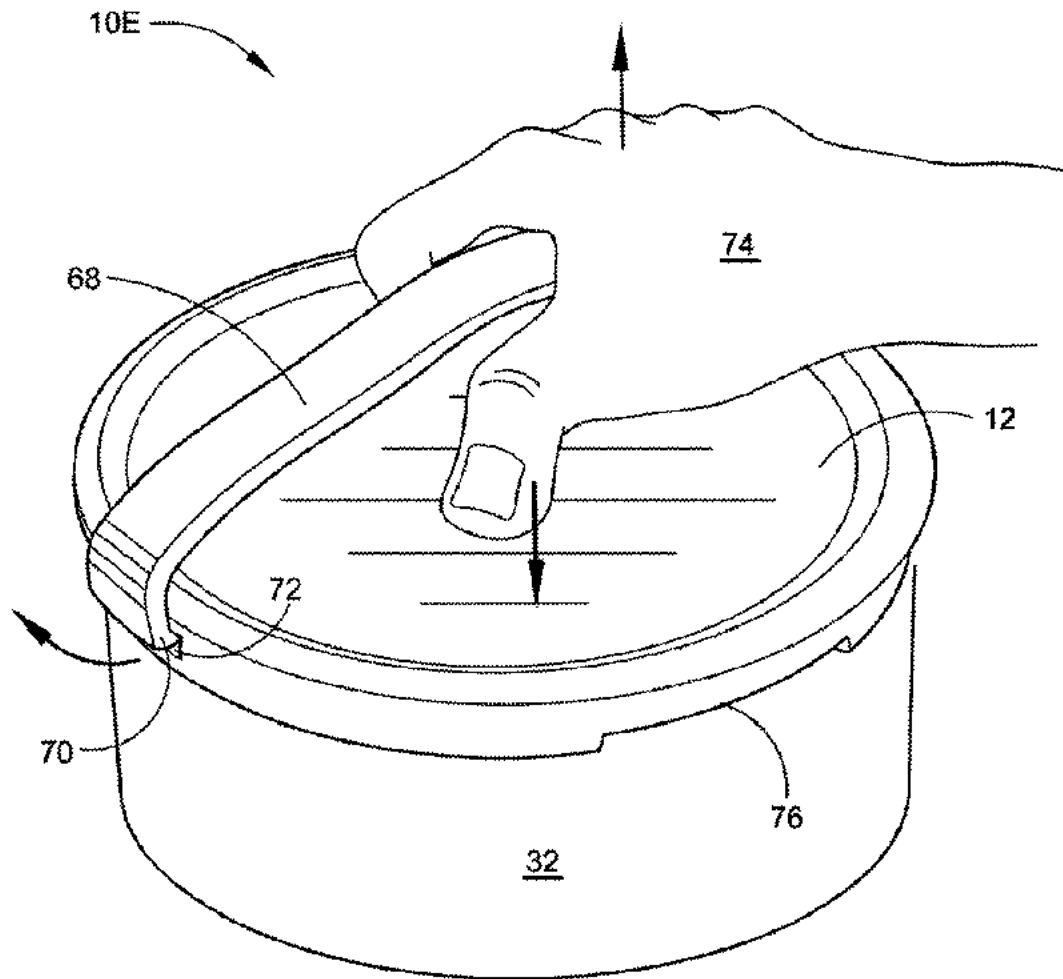


FIG. 20

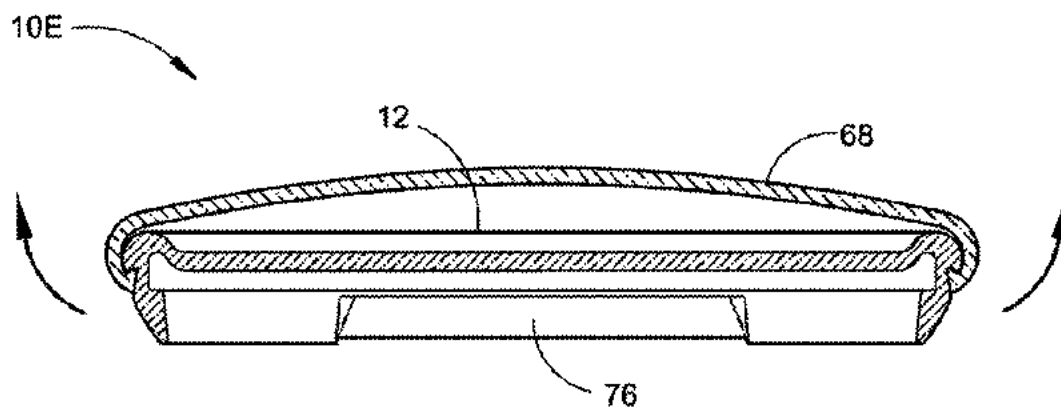


FIG. 21

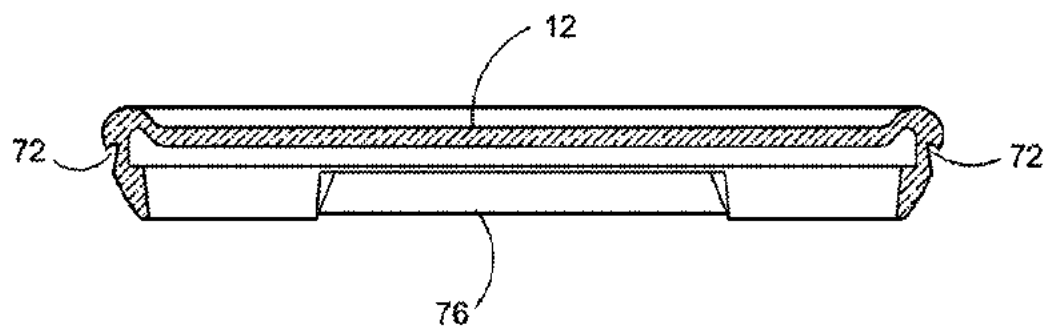


FIG. 22

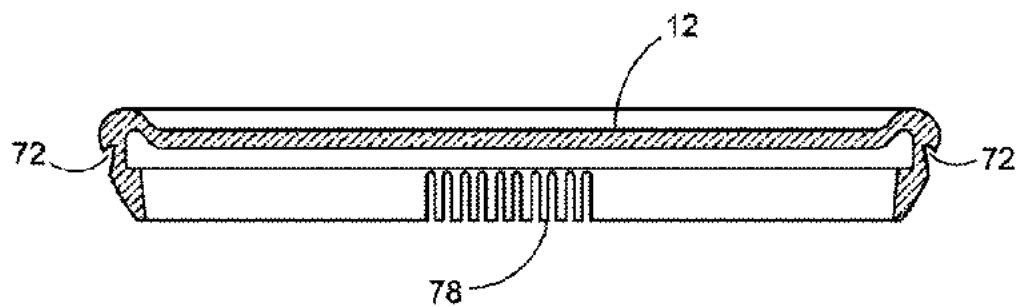


FIG. 23

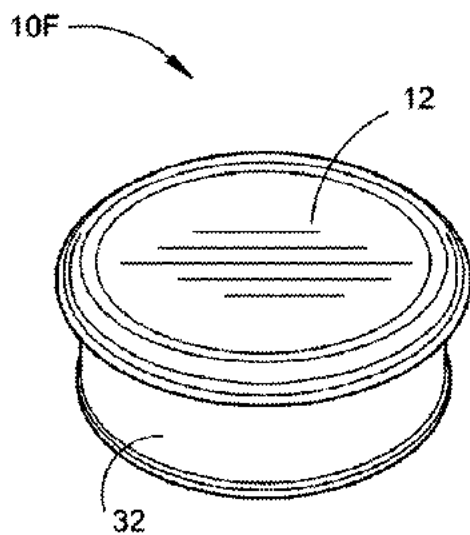


FIG. 24

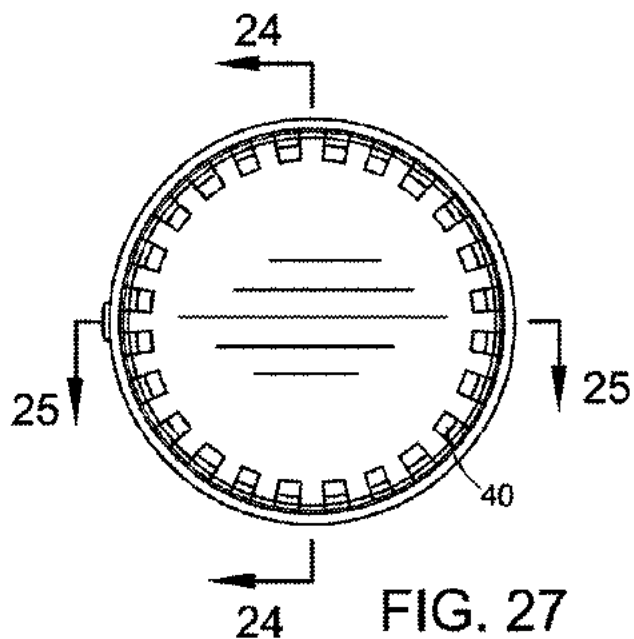


FIG. 27

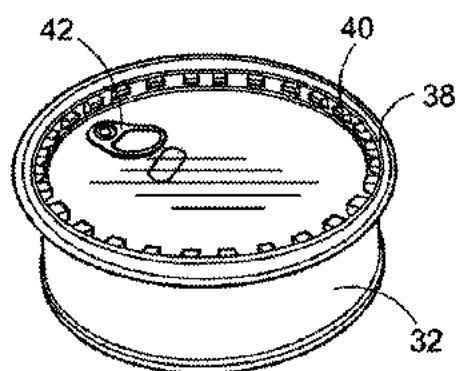


FIG. 25

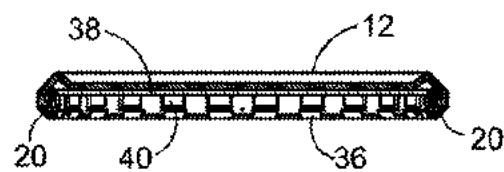


FIG. 28

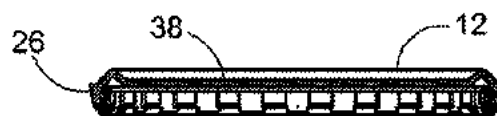


FIG. 29

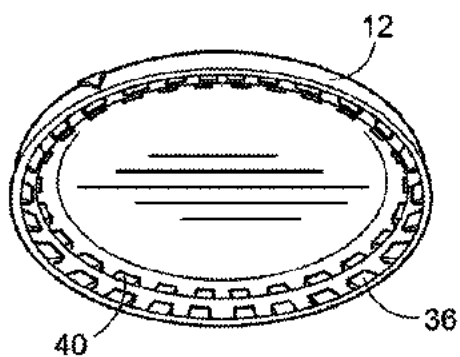


FIG. 26

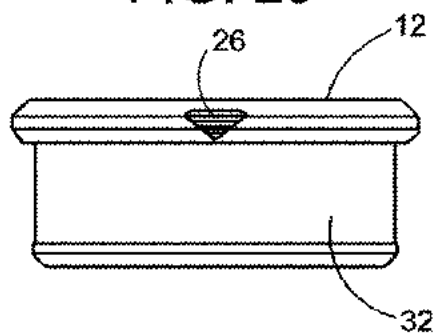


FIG. 30

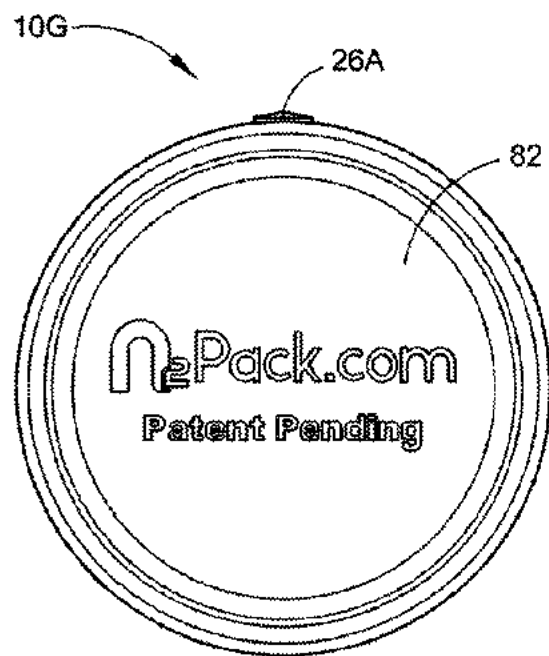


FIG. 31

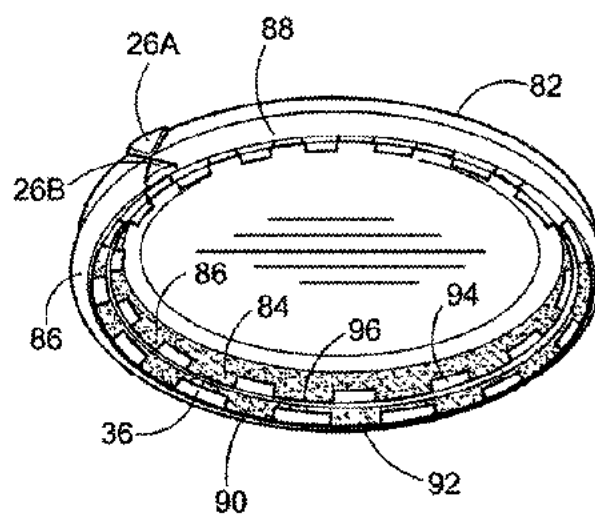


FIG. 32

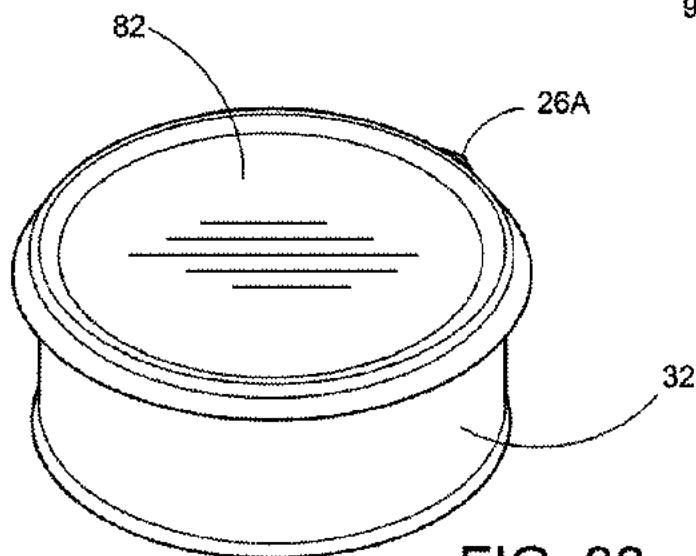


FIG. 33

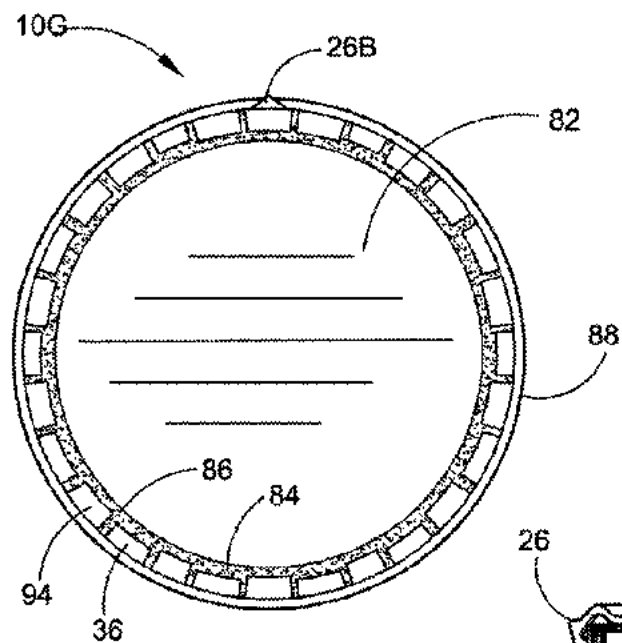


FIG. 34

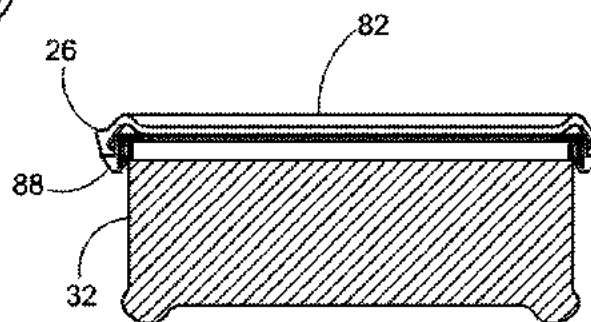


FIG. 35

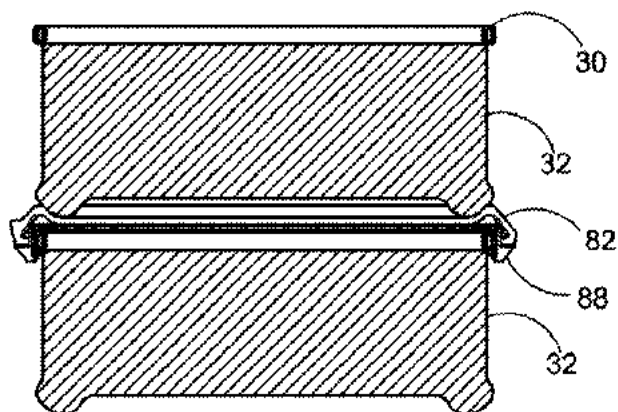


FIG. 36

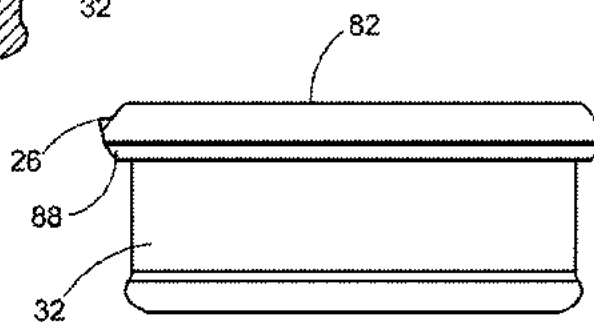


FIG. 37

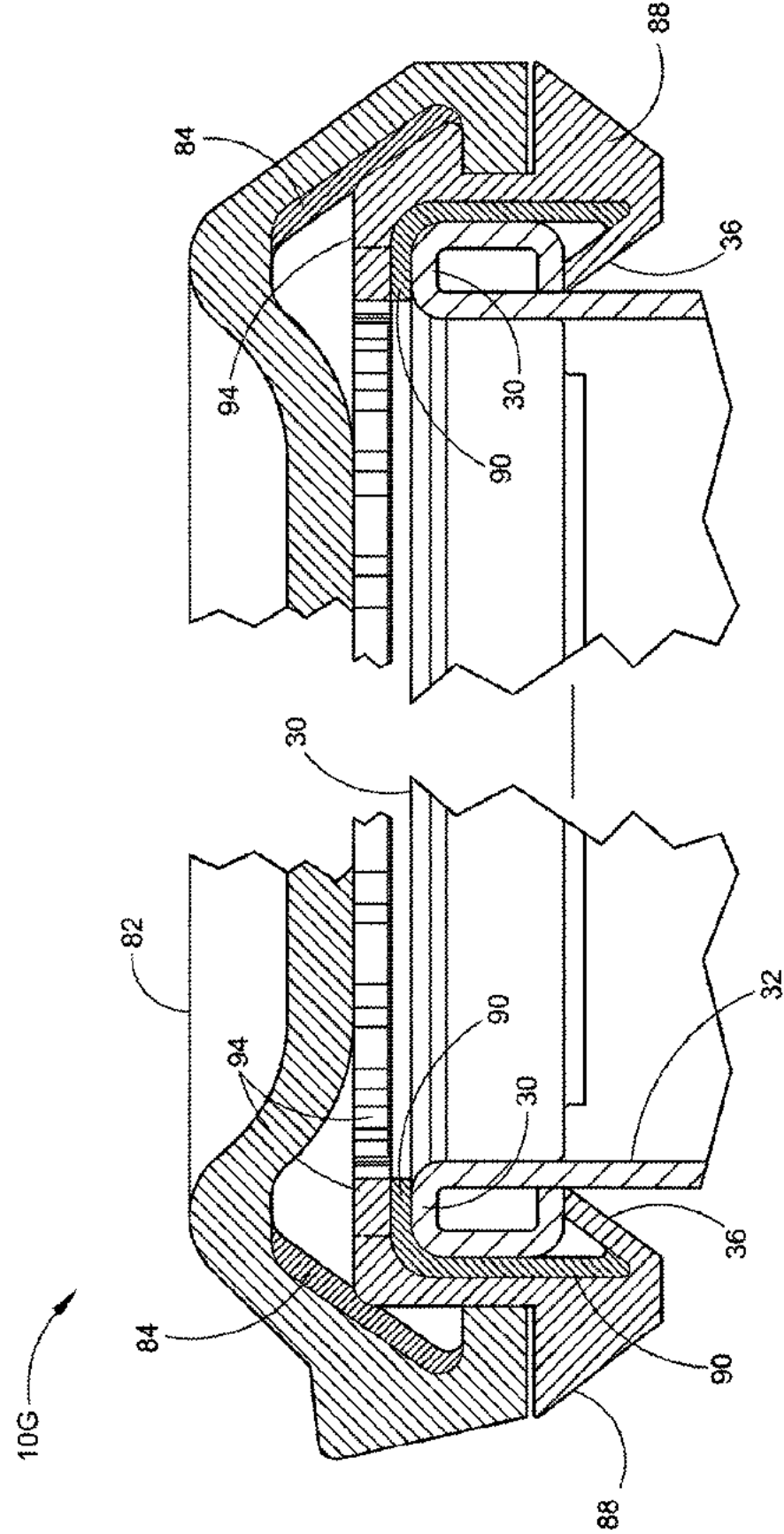


FIG. 38

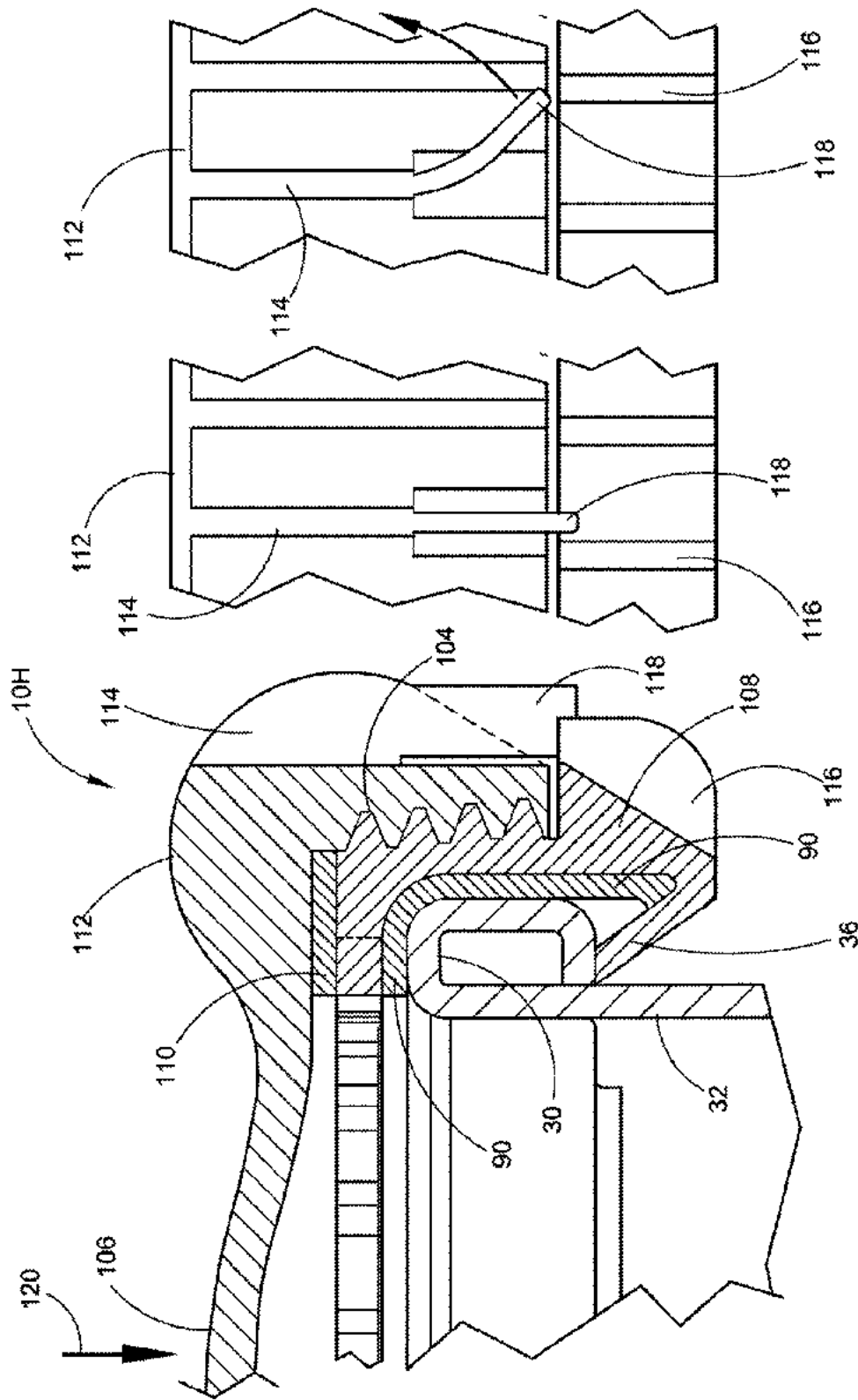


FIG. 39

FIG. 40

FIG. 41

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CHILD RESISTANT AND SENIOR FRIENDLY CAN LID

FIELD OF THE INVENTION

[0001] This application provides a new and unique can lid for metal cans that will be difficult for children to open but adults, especially senior adults, will have the ability to open the lid and replace it and reseal the container so equipped, readily and easily. More particularly, a child resistant and senior friendly can lid is provided having a replaceable can lid and a locking member.

BACKGROUND OF THE INVENTION

[0002] Canning is the process of preserving a product by processing and sealing it in an airtight metal can. Cans are typically either two-piece or three-piece cans. In the case of a two-piece can, a can body is formed by punching a metal plate to form a cylinder closed at one end. The can is then filled and the open end closed by seaming a lid to the can body during the canning process. In the case of a three-piece can, a can body, open at both ends, is formed by rolling and seaming a metal plate. A first end is closed by seaming a lid to the can body. The can is then filled and the second end closed by seaming a lid to the can body during the canning process.

[0003] Once these cans are opened with a conventional can opener they are difficult to reseal adequately. In some cases, individuals do not want cans to be opened easily by children where they could be carrying a harmful substance. Thus, there needs to be developed a can lid that is child resistant and can be initially installed on a can to be removed by an adult and then the child resistant lid can be put back on the can in the same condition where a child could still not be able remove it.

[0004] Numerous innovations for a Child Resistant Can Lid have been provided in the prior art that are described as follows. Even though these innovations may be suitable for the specific individual purposes to which they address, they differ from the present design as hereinafter contrasted. The following is a summary of those prior art patents most relevant to this application at hand, as well as a description outlining the difference between the features of the Child Resistant Can Lid and the prior art.

[0005] US Patent Application Publication No. 2006/0060578 of John R. Church et al. describes a secure locking container and lid assembly, including a resilient plastic container and lid, are closed by snap-lock engagement of the lid in a locking groove in the interior of the container mouth making it virtually impossible to manually remove the lid without damaging the container assembly or the product therein.

[0006] This patent describes a resilient plastic container and lid but does not describe a lid for a can that is difficult for a child to attempt to remove and may be easily removed and securely put back on by an adult.

[0007] US Patent Application Publication No. 2015/0290699 of Paul Charles Claydon describes a process for closing a metal can body, suitable for containing an edible product, with a can lid, to provide a metal can suitable for heating in a retort. The process comprises: placing a metal lid over and in contact with an open end of a metal can body; applying an inwardly directed mechanical force to the lid such that at least a central portion of the lid is deformed into

the interior space of the metal can body; and seaming the lid to the can body to form an airtight seal between the lid and the can body.

[0008] This patent describes a process for closing a metal can body but does not deal with a removable and resealable metal child resistant can lid.

[0009] None of these previous efforts, however, provides the benefits attendant with the Child Resistant and Senior Friendly Can Lid. The present design achieves its intended purposes, objects and advantages over the prior art devices through a new, useful and unobvious combination of method steps and component elements, with the use of a minimum number of functioning parts, at a reasonable cost to manufacture, and by employing readily available materials.

SUMMARY OF THE INVENTION

[0010] The principle advantage of the preferred embodiment of the Child Resistant and Senior Friendly Can Lid is that they cannot be easily opened in a conventional manner by a child, yet is readily openable by adults, especially senior adults.

[0011] Another advantage of the Child Resistant and Senior Friendly Can Lid is that the outer edge is tapered in and smooth and not easy to grip or pry off.

[0012] Another advantage of the Child Resistant and Senior Friendly Can Lid is that by weakening the inner surface at one hundred and eighty degrees the material can flex upward to release the lid from the can when pressure is applied.

[0013] Another advantage of the Child Resistant and Senior Friendly Can Lid is that when the lid sealing ledge is relieved in the two areas ninety degrees apart, a ridge is left there to maintain the seal when the lid is attached to a can.

[0014] Another advantage of the Child Resistant and Senior Friendly Can Lid is that one protrusion on the side of the lid allows a gripping means to push up to open the can lid.

[0015] Another advantage is the material is malleable enough to keep it tight on the can and soft enough for adults, especially senior adults, to pull it off, thereby easily opening the resealed can so equipped.

[0016] Another advantage is with the first alternate embodiment having relief gripping sections one hundred and eighty degrees apart on the edge of the lid for a tool strap to engage so that the can lid will flex upward to release the lid from the can when pressure is applied.

[0017] Another advantage is with a second alternate embodiment is having a plurality of slots one hundred and eighty degrees apart on the edge of the lid so it will flex upward to release the lid from the can when pressure is applied.

[0018] Another advantage is with a third alternate embodiment is the Child Resistant and Senior Friendly Can Lid will have relief gripping locations one hundred and eighty degrees apart on the edge of the lid.

[0019] Another advantage is with a fourth alternate embodiment is the Child Resistant and Senior Friendly Can Lid will have a plurality of slots one hundred and eighty degrees apart on the edge of the lid so it will flex upward.

[0020] Another advantage is with a fifth alternate embodiment of the Child Resistant and Senior Friendly Can Lid will have a securing unit to lock the can locking member in place.

[0021] Another advantage is with a sixth alternate embodiment of the Child Resistant and Senior Friendly Can Lid will

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have a rubber sealant coating applied to the lid inner surface, with the vacuum sealing can locking member having the rubber sealant applied on the inner surface

[0022] Another advantage is with a seventh alternate embodiment of the Child Resistant and Senior Friendly Can Lid will incorporate a threaded attachment between the lid and the vacuum sealable can locking member.

[0023] The preferred embodiment of the Child Resistant and Senior Friendly Can Lid will be comprised of two parts, a lid and a can locking member. The locking inner member has an external locking trough around the circumference with a narrow relief area. The lid has a mating locking inner portion that engages within the trough in the can locking member with a locking nib that when located next to the relief area in the can be pressed upward to remove the lid. An upper portion of an arrow shaped indicator is located on the can lid and a lower portion of the arrow shaped indicator is located on the can locking member.

[0024] The lid can be rotated so that the locking nib does not align with the relief area and the can will remain locked until the lid is again rotated until the two parts of the arrow shaped indicator section come together. Preferably, fourteen (14) restraining teeth on the inner lower edge of the can locking member will be forced over and will engage under the can lip to lock the Child Resistant and Senior Friendly Can Lid to the can. The number of retaining teeth can be varied from 14 to 25 teeth.

[0025] The preferred embodiment of the Child Resistant and Senior Friendly Can Lid will have tapered, smooth sides to make the lid hard to grasp and a sealing ledge on the cap inside surface to grab the seam roll of the upper edge of the can. The lid sealing ledge is relieved in two areas ninety degrees apart leaving a ridge to maintain a seal when the lid is attached to a can. The lid will flex when it is pushed up where the indicia "PUSH UP" and the lifting protrusion are located with a small tab located below to make it easier for adults to remove the cap.

[0026] The first alternate embodiment of the Child Resistant and Senior Friendly Can Lid will be comprised of three parts, the lid, the can locking member and the securing unit. The lid has a mating locking inner portion that engages within the trough in the can locking member with a locking nib that when located next to the relief area in the can be pressed upward to remove the lid. The securing unit has fourteen wedge shaped teeth that are pressed between the can locking member and the lid of the can to further secure Child Resistant Can and Senior Friendly Lid to the can.

[0027] The second alternate embodiment of the Child Resistant and Senior Friendly Can Lid will be comprised of three parts, the lid, the can locking member and the securing unit. The fourteen restraining teeth on the inner lower edge of the can locking member have a thinner cross section and are longer and more flexible so that they fully bend up under the can the can lip to lock the Child Resistant and Senior Friendly Can Lid to the can.

[0028] The third alternate embodiment of the Child Resistant and Senior Friendly Can Lid will have relief gripping locations one hundred and eighty degrees apart on the edge of the lid for a strap tool to engage on either side of the outer perimeter so that the can lid will flex upward to release the lid from the can when an upward pressure is applied on the strap tool and a downward pressure is applied by the thumb against the lid.

[0029] The fourth alternate embodiment of the Child Resistant and Senior Friendly Can Lid will have a plurality of slots one hundred and eighty degrees apart on the edge of the lid so it will flex upward to release the lid from the can when an upward pressure is applied on the strap tool and a downward pressure is applied by the thumb against the lid.

[0030] The fifth alternate embodiment of the Child Resistant and Senior Friendly Can Lid will have a securing unit to lock the can locking member in place.

[0031] The sixth alternate embodiment of the Child Resistant and Senior Friendly Can Lid will have a rubber sealant coating applied to the lid inner surface, with the vacuum sealing can locking member having the rubber sealant applied on the inner surface of the edge.

[0032] The seventh alternate embodiment of the Child Resistant and Senior Friendly Can Lid will incorporate a threaded attachment between the lid and the Vacuum sealing can locking member. The vacuum sealing can locking member puts pressure on the rubber sealing coating on the side and top of the can rim when the restraining teeth are locked under the can rim. When the lid is tightened down it puts pressure on the rubber sealing coating on the lid and the vacuum sealing can locking member. The lid has a bulbous area on the outer edge with a plurality gripping ribs around the perimeter to aid in tightening down the lid. A second set of gripping ribs are on the perimeter of the Vacuum sealing can locking member helps in tightening the lid. A flexible locking tab is located on one of the gripping ribs to engage with one of the gripping ribs that can be bent upward to release the lid to rotate and open the can. By pressing down on the lid, a partial vacuum will be achieved within the can.

[0033] With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of this application, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art. All equivalent relationships to those illustrated in the drawings and described in the specification intend to be encompassed by the present disclosure. Therefore, the foregoing is considered as illustrative only of the principles of the Child Resistant and Senior Friendly Can Lid. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the design to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of this application.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034] The accompanying drawings, which are incorporated in and form a part of this specification, illustrate embodiments of the Child Resistant and Senior Friendly Can Lid and together with the description, serve to explain the principles of this application.

[0035] FIG. 1 depicts a cross section of the preferred embodiment of the assembled Child Resistant and Senior Friendly Can Lid over a conventional can, in accordance with the present invention.

[0036] FIG. 2 depicts a side view of two cans with the Child Resistant and Senior Friendly Can Lid stacked one on top of the other having the upper can with the two parts of the indicator section in the can opening position and the lower can with the indicator section separated in the can locked position, in accordance with the present invention.

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[0037] FIG. 3 depicts a top view of the can locking member of the preferred embodiment of the Child Resistant and Senior Friendly Can Lid with restraining teeth, in accordance with the present invention.

[0038] FIG. 4 depicts a cross section through the lid of the preferred embodiment of the Child Resistant and Senior Friendly Can Lid, in accordance with the present invention.

[0039] FIG. 5 depicts a cross section through the preferred embodiment of the can locking member with restraining teeth, in accordance with the present invention.

[0040] FIG. 6 depicts the first alternate embodiment Child Resistant and Senior Friendly Can Lid illustrating a side view of a conventional can incorporating the Child Resistant and Senior Friendly Can Lid, in accordance with the present invention.

[0041] FIG. 7 depicts a cross section through the assembled first alternate embodiment of the Child Resistant and Senior Friendly Can Lid with the conventional can lid with the locking nib section and the can locking member with the addition of a securing unit, in accordance with the present invention.

[0042] FIG. 8 depicts a cross section through the assembled first alternate embodiment of the Child Resistant and Senior Friendly Can Lid, the can locking member with external locking trough and teeth along with wedge teeth on the securing unit, in accordance with the present invention.

[0043] FIG. 9 depicts a cross section through separate first alternate embodiments of the Child Resistant and Senior Friendly Can Lid, the can locking member with teeth and wedge teeth on the securing unit, in accordance with the present invention.

[0044] FIG. 10 is a cross section through the assembled second alternate embodiment of the Child Resistant and Senior Friendly Can Lid with a lid, the can locking member with an external locking trough and a relief area for the locking nib. The restraining teeth on the can locking member will have a flexible a configuration, in accordance with the present invention.

[0045] FIG. 11 is a cross section through the assembled second alternate embodiment of the Child Resistant and Senior Friendly Can Lid with a conventional lid with an internal locking inner protrusion, the can locking member with an external locking trough for the locking nib and having a different configuration of the restraining teeth and the securing unit, in accordance with the present invention.

[0046] FIG. 12 is a cross section of the assembled second alternate embodiment of the Child Resistant and Senior Friendly Can Lid with a lid, and the can locking member with the segments of the restraining teeth flat, prior to being bent up when inserted over a conventional can, in accordance with the present invention.

[0047] FIG. 13 depicts separate cross sections of the second alternate embodiment of the Child Resistant and Senior Friendly Can Lid illustrating the lid, the can locking member and the securing unit, in accordance with the present invention.

[0048] FIG. 14 depicts a perspective bottom view of the lid, in accordance with the present invention.

[0049] FIG. 15 depicts a perspective view of the top conventional can with pop top opener and the securing unit in place, in accordance with the present invention.

[0050] FIG. 16 depicts a top view of the third alternate embodiment Child Resistant and Senior Friendly Can Lid having a flexible lid, in accordance with the present invention.

[0051] FIG. 17 depicts a side view of the third alternate embodiment Child Resistant and Senior Friendly Can Lid with a flexible lid with the push up indicia and a lifting tab, in accordance with the present invention.

[0052] FIG. 18 depicts a bottom view of the third alternate embodiment Child Resistant and Senior Friendly Can Lid with the flexible lid, in accordance with the present invention.

[0053] FIG. 19 depicts a cross section of the third alternate embodiment Child Resistant and Senior Friendly Can Lid with the flexible lid, in accordance with the present invention.

[0054] FIG. 20 depicts a perspective view of the forth alternate embodiment Child Resistant and Senior Friendly Can Lid with a flexible lid and a hand with a strap tool exerting pressure to bend the lid to open the can, in accordance with the present invention.

[0055] FIG. 21 depicts a cross section of the flexible lid with the opening tool, in accordance with the present invention.

[0056] FIG. 22 depicts a cross section of the flexible lid with a thin section to aide in the flexibility of the lid, in accordance with the present invention.

[0057] FIG. 23 depicts a cross section of the flexible lid with a slotted section to aide in the flexibility of the lid, in accordance with the present invention.

[0058] FIG. 24 depicts a perspective view of the fifth alternate embodiment Child Resistant and Senior Friendly Can Lid Child Resistant and Senior Friendly Can Lid on a can, in accordance with the present invention.

[0059] FIG. 25 depicts a perspective view of the top of a conventional can with pop top opener and the securing unit in place, in accordance with the present invention.

[0060] FIG. 26 depicts a bottom view of the assembled Child Resistant and Senior Friendly Can Lid with the securing unit in place, in accordance with the present invention.

[0061] FIG. 27 depicts a bottom view of the Child Resistant and Senior Friendly Can Lid, in accordance with the present invention.

[0062] FIG. 28 depicts a cross section of the assembled Child Resistant and Senior Friendly Can Lid, in accordance with the present invention.

[0063] FIG. 29 depicts a cross section of the assembled Child Resistant and Senior Friendly Can Lid illustrating the location of the indicator section on the left side, in accordance with the present invention.

[0064] FIG. 30 depicts a side view of a conventional can incorporating the Child Resistant and Senior Friendly Can Lid, in accordance with the present invention.

[0065] FIG. 31 depicts a top view of the sixth alternate embodiment of the Child Resistant and Senior Friendly Vacuum Sealing Can Lid, in accordance with the present invention.

[0066] FIG. 32 depicts a perspective view of the underside of the Vacuum Sealing Lid, in accordance with the present invention.

[0067] FIG. 33 depicts a perspective view of the top surface of the Vacuum Sealing Lid on the conventional can, in accordance with the present invention.

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[0068] FIG. 34 depicts the underside of the sixth alternate embodiment of the Child Resistant and Senior Friendly Vacuum Sealing Can Lid incorporating the vacuum sealing can locking member, in accordance with the present invention.

[0069] FIG. 35 depicts a cross section of the conventional can with the Vacuum Sealing Lid incorporating the Vacuum sealing can locking member, in accordance with the present invention.

[0070] FIG. 36 depicts a cross section of two conventional cans with the Vacuum Sealing Lid on the lower can, in accordance with the present invention.

[0071] FIG. 37 depicts a side view of a conventional can with the Vacuum Sealing Lid, in accordance with the present invention.

[0072] FIG. 38 depicts a cross section of the seventh alternate embodiment Child Resistant and Senior Friendly Can Lid illustrating the Vacuum Sealing Lid having a rubber seal coating and the Vacuum sealing can locking member, in accordance with the present invention.

[0073] FIG. 39 depicts a cross section of the eighth alternate embodiment Child Resistant and Senior Friendly Child Proof Vacuum Sealing Lid incorporating a threaded attachment to the Vacuum sealing can locking member, in accordance with the present invention.

[0074] FIG. 40 depicts a partial side view of the eighth alternate embodiment of the Child Resistant and Senior Friendly Child Proof Vacuum Sealing Lid in the locked position, in accordance with the present invention.

[0075] FIG. 41 depicts a partial side view of the eighth alternate embodiment of the Child Resistant and Senior Friendly Child Proof Vacuum Sealing Lid in the unlocked position, in accordance with the present invention.

[0076] For a fuller understanding of the nature and advantages of the Child Resistant and Senior Friendly Can Lid, reference should be had to the following detailed description taken in conjunction with the accompanying drawings which are incorporated in and form a part of this specification, illustrate embodiments of the design and together with the description, serve to explain the principles of this application.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0077] Referring now to the drawings, wherein similar parts of the preferred embodiment of the Child Resistant and Senior Friendly Can Lid 10A are identified by like reference numerals, there is seen in FIG. 11 depicting a cross section view of the preferred embodiment of the Child Resistant Can Lid 10A indicating the lid 12 with a contoured surface 14 to secure additional cans for stacking. A locking inner ring 16 of the lid 12 engages within the external locking trough 18 in the circumference of the can locking member 20 with a relief area 22 to access the nib section 24 of the lid 12 for the removal of the lid 12 when an upward pressure is applied at the lifting indicator section 26. The top surface 28 of the can locking member 20 rests on the rim 30 of the can 32 and is held in place by the upper surface 34 of the external locking trough 18. A series of restraining teeth 36 around the lower inner surface of the of the can locking member 20 are bent up when the when the locking member 20 is forced over the top rim 30 of the can 32 to engage under the lip of the can 30.

[0078] FIG. 2 depicts a side view of two stacked cans 32 with the lower can 32 having the two sections of the lifting indicator section 26, 26A and 26B together in the opening position. The lower can has the lid 12 rotated so that indicator section 26A is moved to the right putting the lid 12 in the locking position.

[0079] FIG. 3 depicts a top view of the can locking member 20 illustrating the 14 restraining teeth 36 and the relief area 22 for the can locking member 20.

[0080] FIG. 4 depicts a cross section of the lid 12 illustrating the location of the nib section 24 and the locking inner ring 16.

[0081] FIG. 5 depicts a cross section of the can locking member 20 illustrating the external locking trough 18 where the locking inner ring 16 is securely held in place. The top surface 28 of the can locking member 20 rests on the rim 30 of the can 32, the 14 restraining teeth 36 are shown on the lower surface with the single relief area 22 for the nib section 24 on the left side.

[0082] FIG. 6 depicts a side view of a conventional can 32 incorporating the first alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10B.

[0083] FIG. 7 depicts a cross section through the assembled first alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10B with the conventional can 32 having a locking nib 24 and the can locking member 20 with the addition of a securing unit 38.

[0084] FIG. 8 depicts a cross section through the assembled first alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10B, the can locking member 20 with external locking trough 18 and 24 restraining teeth 36 along with 24 wedge teeth 40 on the securing unit 38.

[0085] FIG. 9 depicts a cross section through separate first alternate embodiment of the Child Resistant and Senior Friendly Can 10B with the Lid 12 having the can locking member 20 with locking nib 24 restraining teeth 36 and 24 wedge teeth 40 on the securing unit 38.

[0086] FIG. 10 depicts a cross section through the assembled second alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10C with a lid 12, having the can locking member 20 with an external locking trough 18 and a relief area 22 for the locking nib 24. The 24 restraining teeth 36 on the can locking member 20 will have a thinner cross section for a more flexible configuration.

[0087] FIG. 11 is a cross section through the assembled second alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10C with a lid 12, and the can locking member 20 with an external locking trough 18 for the locking nib 24 and having the different configuration of the restraining teeth 36.

[0088] FIG. 12 is a cross section of the assembled second alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10C with a lid 12, and the can locking member 20 with the 24 segments of the restraining teeth 36 flat, prior to being bent up when inserted over a conventional can 32.

[0089] FIG. 13 depicts separate cross sections of the second alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10C illustrating the lid 12, the can locking member 20 and the securing unit 38.

[0090] FIG. 14 depicts a perspective bottom view of the second alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10C, lid 12.

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[0091] FIG. 15 depicts a perspective view of the top conventional can 32 with an easy open “pop-top” opener 42 and the securing unit 38 in place, having numerous teeth 40.

[0092] FIG. 16 depicts a top view of the third alternate embodiment Child Resistant and Senior Friendly Can Lid 10D having a flexible lid 12.

[0093] FIG. 17 depicts a side view of the third alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10D depicting the lifting protrusion 48 and the indicia 50 “PUSH UP” and the tab 52 to assist in the removal of the lid 12. The outer perimeter 54 has a smooth angled surface 56 making it difficult to grip by children.

[0094] FIG. 18 depicts a bottom view of the bottom surface 60 of the third alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10D illustrating the tab 52 location and the inner edge surface 62 that is relieved 64 on two areas leaving a ridge 66 to the lid sealing ledge 62 maintain the sealing capability when the Child Resistant and Senior Friendly Can Lid 10D is placed or replaced on a conventional can 32.

[0095] FIG. 19 depicts a cross section through the third alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10D further illustrating the tab 52 location, and the inner edge surface 62 is relieved areas 64 on two areas leaving a lid sealing ledge 66. The Child Resistant and Senior Friendly Can Lid 12 can be rotated upward for removal by stretching the material in the relieved areas 64.

[0096] FIG. 20 depicts in 10E a perspective view of the forth alternate embodiment Child Resistant and Senior Friendly Can Lid 10E with a flexible lid 12 and a person's hand using a specialized tool for exerting pressure to bend the lid to readily open the can 32.

[0097] FIG. 21 depicts a cross section through the forth alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10E where pressure can be exerted to bend the lid 12 at the relieved area 76 to open the conventional can 32.

[0098] FIG. 22 depicts a cross section through the forth alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10E further illustrating the location of the apertures 72 and the relived area 76 to aide in the flexibility of the lid 12.

[0099] FIG. 23 depicts a cross section through the forth alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10E with a plurality of slots 78 one hundred and eighty degrees apart in the relieved area 76 of the lid so it will flex upward to release from the conventional can 32 when pressure is applied.

[0100] FIG. 24 depicts in 10F a perspective view of the fifth alternate embodiment Child Resistant and Senior Friendly Can 10F with the lid 12 on a conventional can 32.

[0101] FIG. 25 depicts a perspective view of the top of a conventional can 32 with pop-top opener 42 and the securing unit with the tops of the 24 wedge teeth 40 in can locking member 20.

[0102] FIG. 26 depicts a bottom view of the assembled fifth alternate embodiment of the Child Resistant and Senior Friendly Can Lid 10F with the securing unit 38 illustrating the 24 restraining teeth 36 and the 24 wedge teeth 40.

[0103] FIG. 27 depicts a bottom view of the fifth alternate embodiment Child Resistant and Senior Friendly Can Lid 10F illustrating the location of the wedge teeth 40.

[0104] FIG. 28 depicts a cross section of the assembled fifth alternate embodiment Child Resistant and Senior Friendly Can Lid 10F lid 12, the can locking member 20 and the restraining teeth 36.

[0105] FIG. 29 depicts a cross section of the assembled fifth alternate embodiment Child Resistant and Senior Friendly Can Lid 10F illustrating the location of the indicator section 26 on the left side.

[0106] FIG. 30 depicts a side view of a conventional can 32 incorporating the Child Resistant and Senior Friendly Can Lid 12.

[0107] FIG. 31 depicts a top view of the sixth alternate embodiment Child Resistant and Senior Friendly Can Lid 10G vacuum sealing lid 82.

[0108] FIG. 32 depicts in 10G a perspective view of the underside of the vacuum sealing lid 82 with the rubber sealant coating 84 applied to the lid inner surface 86, with the vacuum sealing can locking member 88 having the rubber sealant 90 applied on the inner surface of the edge 92. The inner surface of the vacuum sealing can locking member 88 has a plurality of restraining teeth 36 on the lower edge 92 and a plurality of upper supporting teeth 94 on the upper edge 96.

[0109] FIG. 33 depicts a perspective view of the top surface of the vacuum sealing lid 82 on the conventional can 32.

[0110] FIG. 34 depicts the sixth alternate embodiment Child Resistant and Senior Friendly Can Lid 10G illustrating the underside of the vacuum sealing lid 82 incorporating the vacuum sealing can locking member 88 with the plurality of restraining teeth 36 on the lower edge 92 and a plurality of upper supporting teeth 94 on the upper edge 96. The indicator section 26B is shown on the outer surface at the top of the illustration.

[0111] FIG. 35 depicts a cross section of the conventional can 32 with the vacuum sealing lid 82 incorporating the vacuum sealing can locking member 88.

[0112] FIG. 36 depicts a cross section of two conventional cans 32 having a rim 30 with the bottom can 32 having the vacuum sealing lid 82 incorporating the vacuum sealing can locking member 88.

[0113] FIG. 37 depicts a side view of a conventional can 32 with the vacuum Sealing lid 82.

[0114] FIG. 38 depicts a cross section of the sixth alternate embodiment Child Resistant and Senior Friendly Can Lid 10G illustrating the vacuum sealing lid 82 having a rubber seal coating 84 and the vacuum sealing can locking member 88 having a rubber seal coating 90. The rubber seal coating 84 presses against the upper surface of the vacuum sealing can locking member 88 and the rubber seal coating 90 presses against the side surface and top surface of the can rim 30 create the vacuum sealing capability when the vacuum sealing lid 82 is pressed down on the conventional can 32 and the restraining teeth 32 grip the lower edge of the can rim 30.

[0115] FIG. 39 depicts a cross section of the seventh alternate embodiment Child Resistant and Senior Friendly Child Proof Can Lid 10H incorporating a threaded attachment 104 between the lid 106 and the vacuum sealing can locking member 108. The vacuum sealing can locking member 108 puts pressure on the rubber sealing coating 90 on the side and top of the can rim 30 when the restraining teeth are locked under the can rim 30. When the lid 106 is

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tightened down it puts pressure on the rubber sealing coating **110** on the lid **106** and the vacuum sealing can locking member **108**.

[0116] The lid **106** has a bulbous area **112** on the outer edge with a plurality of gripping ribs **114** around the perimeter to aide in tightening down the lid **106**. A second set of gripping ribs **116** are on the perimeter of the vacuum sealing can locking member **108**. A flexible locking tab **118** is located on one of the gripping ribs **114** to engage with one of the gripping ribs **116** that can be bent upward to release the lid **106** to rotate and open the can **32**. By pressing **120** down on the lid **106** a partial vacuum will be achieved within the can **32**.

[0117] FIG. **40** depicts a partial side view of the seventh alternate embodiment Child Resistant and Senior Friendly Child Proof Can Lid **10H** illustrating the gripping ribs **114** on the lid **106** and the gripping ribs **116** on the vacuum sealing can locking member **108** with a flexible locking tab **118** straight down in the locked position.

[0118] FIG. **41** depicts a partial side view of the seventh alternate embodiment Child Resistant and Senior Friendly Child Proof Can Lid **10H** illustrating the gripping ribs **114** on the lid **106** and the gripping ribs **116** on the vacuum sealing can having a locking member **108** with the flexible locking tab **118** bent up to release the lid **106** to rotate and be removed.

[0119] The Child Resistant and Senior Friendly Can Lid **10A**, **10B**, **10C**, **10D**, **10E**, **10F**, **10G** and **10H**, shown in the drawings and described in detail herein disclose arrangements of elements of particular construction and configuration for illustrating preferred embodiments of structure and method of operation of the present application. It is to be understood, however, that elements of different construction and configuration and other arrangements thereof, other than those illustrated and described may be employed for providing a Child Resistant and Senior Friendly Can Lid **10A**, **10B**, **10C**, **10D**, **10E**, **10F**, **10G** and **10H**, in accordance with the spirit of this disclosure, and such changes, alternations and modifications as would occur to those skilled in the art are considered to be within the scope of this design as broadly defined in the appended claims.

[0120] Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

We claim:

1. A two-piece child resistant/senior friendly can lid comprising:

- a) a lower first piece locking member having an inner portion and an outer portion including a plurality of evenly spaced wedging teeth and restraining teeth along the circumference of said lower first piece inner portion, and further including an external locking trough located around the circumference of said lower first piece outer portion, and including a protruding first indicator section;

- b) an upper second piece lid portion having a curved lower edge along the entire circumference of said upper second piece lid portion, and including a second protruding indicator section;

wherein said lower first piece is securely affixable to a seal rolled can top and said upper second piece lid portion is securely affixable to said lower first piece by lining up the first indicator section with the second indicator section and applying downward pressure on said upper second piece lid portion.

2. The two-piece child resistant/senior friendly can lid according to claim **1**, wherein said upper second piece lid portion is constructed of a malleable flexible material capable of being flexed upward for removal and of being flexed to expand to affix said upper second piece lid portion.

3. The two-piece child resistant/senior friendly can lid according to claim **1**, wherein said external locking trough including a first protruding indicator section includes a relieved area beneath said first protruding indicator section, and said curved lower edge including a second protruding indicator section has a relieved area beneath said second protruding indicator section whereby when said first and second protruding indicator sections are not lined up directly, said upper second piece lid portion cannot readily be removed, thereby creating a child resistant lid.

4. The two-piece child resistant/senior friendly can lid according to claim **1**, wherein said external locking trough including a first protruding indicator section includes a relieved area beneath said first protruding indicator section, and said curved lower edge including a second protruding indicator section has a relieved area beneath said second protruding indicator section whereby when said first and second protruding indicator sections are lined up directly, said upper second piece lid portion can be readily be removed, thereby creating a senior friendly lid.

5. The two-piece child resistant/senior friendly can lid according to claim **1**, wherein said first protruding indicator section and second protruding indicator section form two opposing arrow shaped indicators.

6. The two-piece child resistant/senior friendly can lid according to claim **1**, wherein said plurality of evenly spaced wedging teeth and restraining teeth along the circumference of said lower first piece inner portion includes about 14 to about 25 wedging teeth and restraining teeth.

7. The two-piece child resistant/senior friendly can lid according to claim **1**, wherein said includes a third piece comprising:

- a) a lid;
- b) a can locking member; and
- c) a securing unit.

8. The two-piece child resistant/senior friendly can lid according to claim **7**, wherein said lid includes a mating locking inner portion and said can locking portion includes a trough whereby said mating locking inner portion engages said trough to secure said lid to a can.

9. The two-piece child resistant/senior friendly can lid according to claim **1**, wherein said lower first piece locking member and said upper second piece lid portion include a rubber seal coating partially applied thereon.

10. The two-piece child resistant/senior friendly can lid according to claim **9**, wherein said rubber seal coating partially applied to both said lower first piece locking

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member and said upper second piece lid portion, thereby create a vacuum sealable can lid which is readily affixed to a seal rolled can.

11. A method for making a two-piece child resistant/senior friendly can lid comprising the steps of:

a) providing a lower first piece locking member having an inner portion and an outer portion including a plurality of evenly spaced wedging teeth and restraining teeth along the circumference of said lower first piece inner portion, and further including an external locking trough located around the circumference of said lower first piece outer portion, and including a protruding first indicator section;

b) providing an upper second piece lid portion having a curved lower edge along the entire circumference of said upper second piece lid portion, and including a second protruding indicator section;

wherein said lower first piece is securely affixable to a seal rolled can top and said upper second piece lid portion is securely affixable to said lower first piece by lining up the first indicator section with the second indicator section and applying downward pressure on said upper second piece lid portion.

12. The method for making a two-piece child resistant/senior friendly can lid according to claim **11**, wherein said upper second piece lid portion is constructed of a malleable flexible material capable of being flexed upward for removal and of being flexed to expand to affix said upper second piece lid portion.

13. The method for making a two-piece child resistant/senior friendly can lid according to claim **11**, wherein said external locking trough including a first protruding indicator section includes a relieved area beneath said first protruding indicator section, and said curved lower edge including a second protruding indicator section has a relieved area beneath said second protruding indicator section whereby when said first and second protruding indicator sections are not lined up directly, said upper second piece lid portion cannot readily be removed, thereby creating a child resistant lid.

14. The method for making a two-piece child resistant/senior friendly can lid according to claim **11**, wherein said external locking trough including a first protruding indicator

section includes a relieved area beneath said first protruding indicator section, and said curved lower edge including a second protruding indicator section has a relieved area beneath said second protruding indicator section whereby when said first and second protruding indicator sections are lined up directly, said upper second piece lid portion can be readily be removed, thereby creating a senior friendly lid.

15. The method for making a two-piece child resistant/senior friendly can lid according to claim **1**, wherein said first protruding indicator section and second protruding indicator section form two opposing arrow shaped indicators.

16. The method for making a two-piece child resistant/senior friendly can lid according to claim **11**, wherein said plurality of evenly spaced wedging teeth and restraining teeth along the circumference of said lower first piece inner portion includes about 14 to about 25 wedging teeth and restraining teeth.

17. The method for making a two-piece child resistant/senior friendly can lid according to claim **11**, wherein said method further includes providing a third piece comprising the steps of:

a) providing a lid;

b) providing a can locking member; and

c) providing a securing unit.

18. The method for making a two-piece child resistant/senior friendly can lid according to claim **17**, wherein said lid includes a mating locking inner portion and said can locking portion includes a trough whereby said mating locking inner portion engages said trough to secure said lid to a can.

19. The method for making a two-piece child resistant/senior friendly can lid according to claim **11**, wherein said lower first piece locking member and said upper second piece lid portion include a rubber seal coating partially applied thereon.

20. The method for making a two-piece child resistant/senior friendly can lid according to claim **19**, wherein said rubber seal coating partially applied to both said lower first piece locking member and said upper second piece lid portion, thereby create a vacuum sealable can lid which is readily affixed to a seal rolled can.

* * * * *

EXHIBIT D



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(12) **United States Patent**
Sibley et al.

(10) **Patent No.:** **US 10,124,941 B2**(45) **Date of Patent:** **Nov. 13, 2018**

(54) **RE-SEALABLE CONTAINER FOR A
CONTROLLED SUBSTANCE HAVING A
CHILD RESISTANT LID**

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(2013.01); *B65D 2203/06* (2013.01);
(Continued)

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Twin Falls, ID (US)

(58) **Field of Classification Search**

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B65D 51/228; *B65D* 81/266; *B65D*
81/268; *B65D* 85/12; *B65D* 2203/02;
B65D 2203/06; *B65B* 7/28; *A61J* 2205/60
USPC 206/204, 213.1, 236, 242, 265, 459.5,
206/524.8; 53/400, 415
See application file for complete search history.

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Michael G. Standlee, Eden, ID (US)

(73) Assignee: **N2 PACKAGING SYSTEMS, LLC,**
Twin Falls, ID (US)

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Primary Examiner — Luan K Bui

(74) Attorney, Agent, or Firm — Richard D. Clarke

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
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(21) Appl. No.: **15/882,962**

(22) Filed: **Jan. 29, 2018**

(65) **Prior Publication Data**

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Related U.S. Application Data

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filed on Oct. 20, 2014, now Pat. No. 9,878,821.

(51) **Int. Cl.**
B65D 81/26 (2006.01)
B65B 29/00 (2006.01)

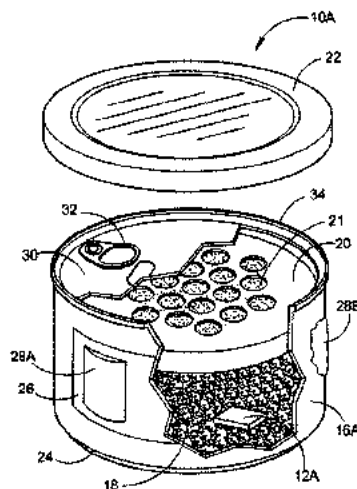
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CPC *B65D 50/062* (2013.01); *A61J 1/03*
(2013.01); *B65B 7/285* (2013.01); *B65D*
43/0212 (2013.01); *B65D 51/228* (2013.01);
B65D 81/2076 (2013.01); *B65D 81/266*
(2013.01); *G01V 15/00* (2013.01); *A61J*
2205/60 (2013.01); *B65D 85/70* (2013.01);

(57) **ABSTRACT**

Provided is a re-sealable container for storing, preserving, identifying, tracking and transporting a federally controlled substance having a child resistant and senior friendly lid, and a process for identifying and tracking federally controlled substances within the re-sealable containers. The re-sealable federally controlled substance containers include a two-piece child resistant and senior friendly lid and a 2-factor authentication identification tag, as well as a microchip for identifying the container controlled substance contents and tracking the container. Controlled substance contents within the re-sealable containers are optimized for long term storage by removal of the oxygen therein, and the containers and controlled substance contents can be readily identified, detected, tracked and traced after being filled with a federally controlled substance.

20 Claims, 10 Drawing Sheets



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B65D 81/20 (2006.01)
B65D 43/02 (2006.01)
B65D 85/00 (2006.01)

(52) U.S. Cl.

CPC .. *B65D 2215/04* (2013.01); *B65D 2251/0006*
(2013.01); *B65D 2251/0096* (2013.01); *B65D*
2517/0016 (2013.01); *B65D 2517/0041*
(2013.01); *B65D 2585/56* (2013.01)

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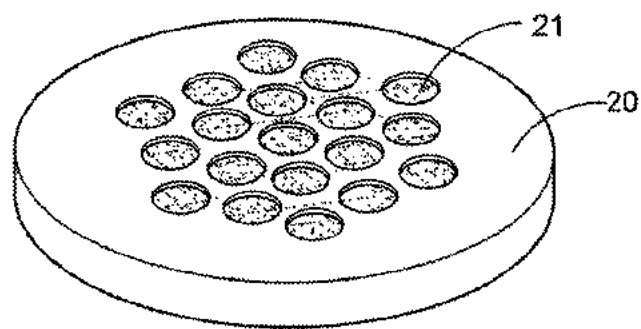
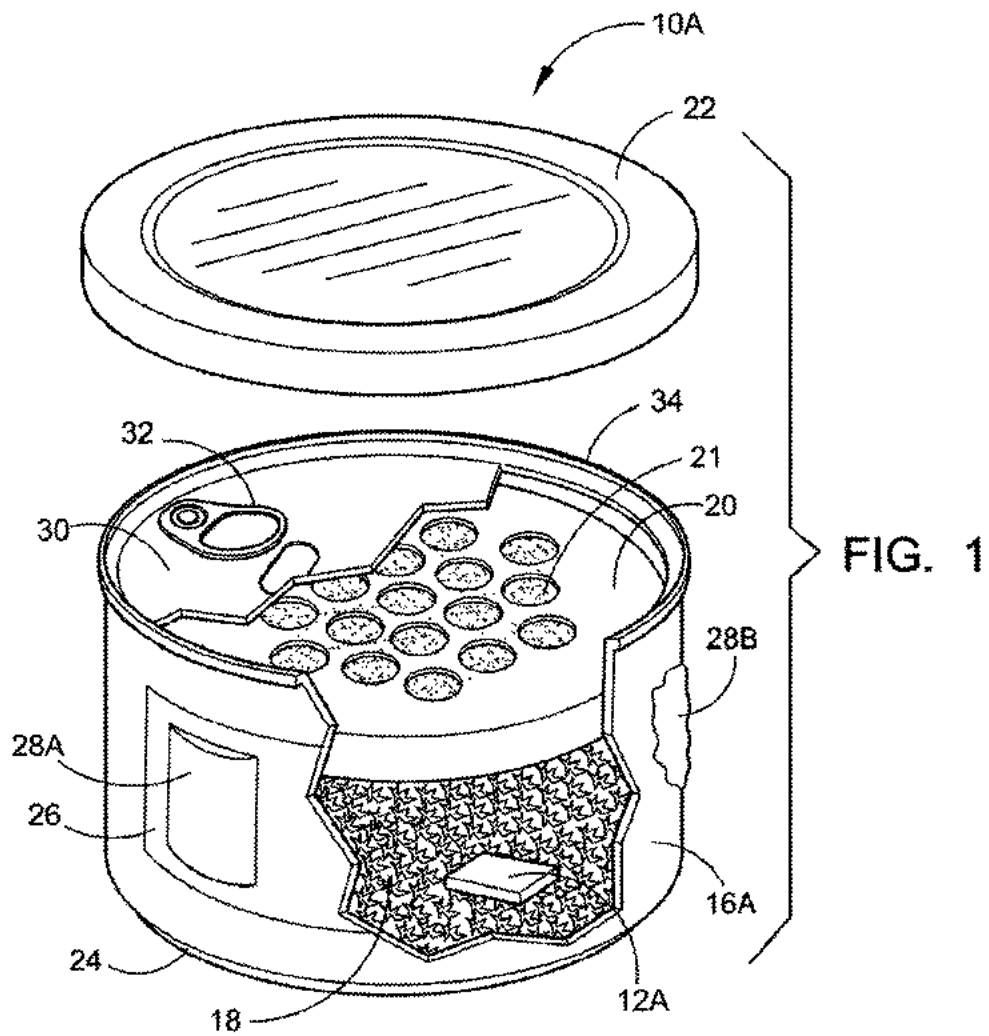
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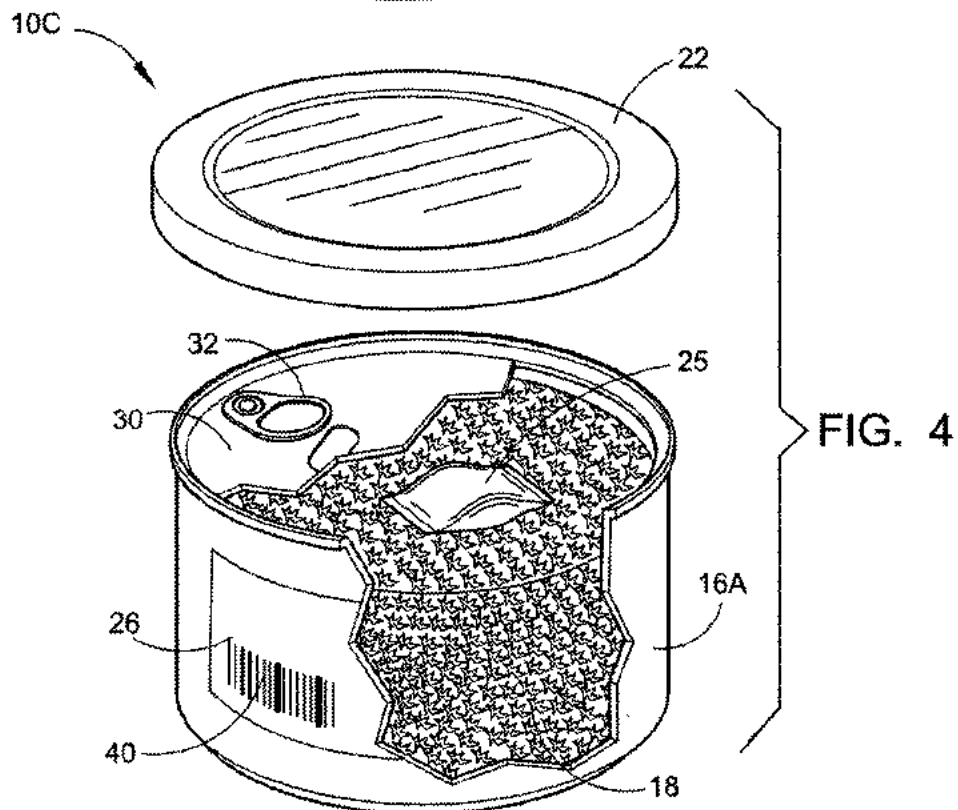
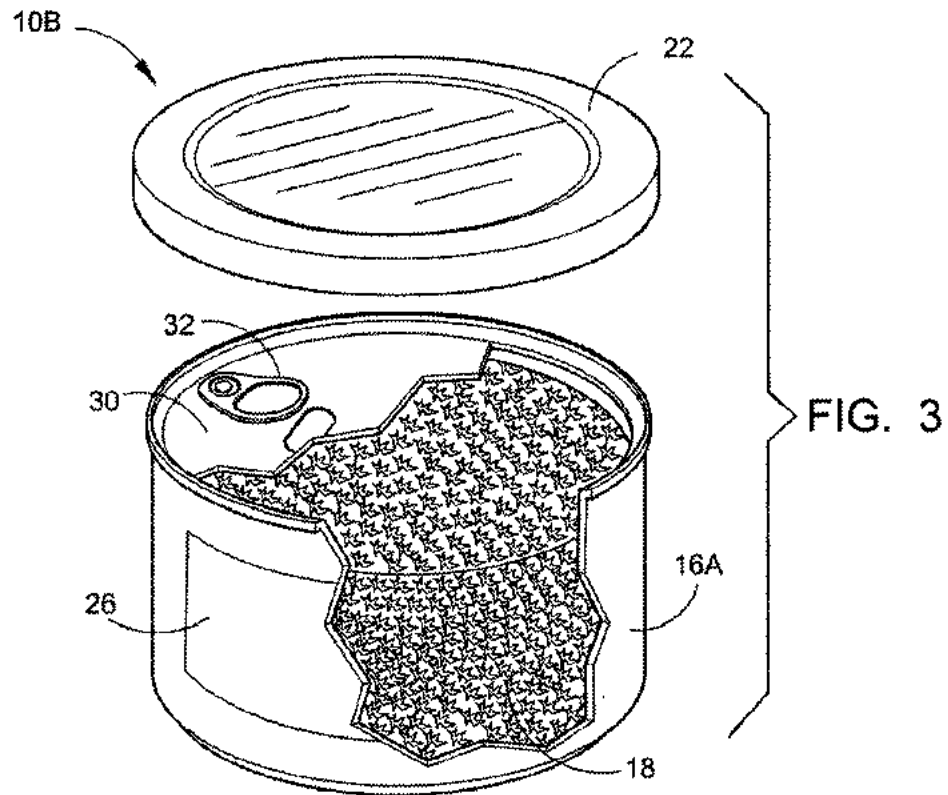


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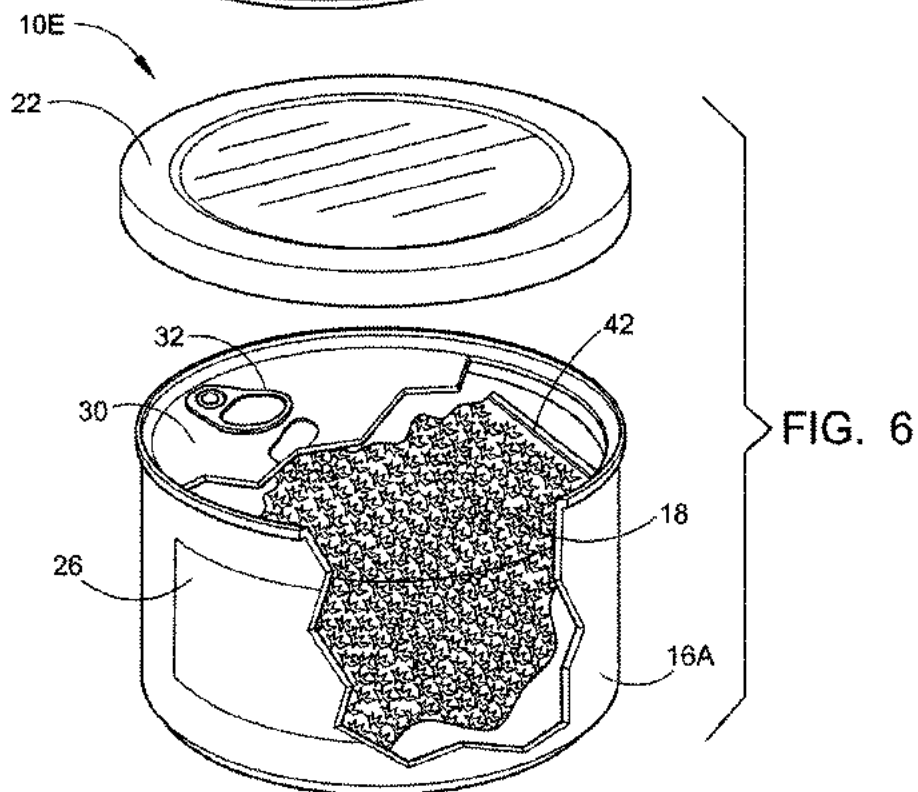
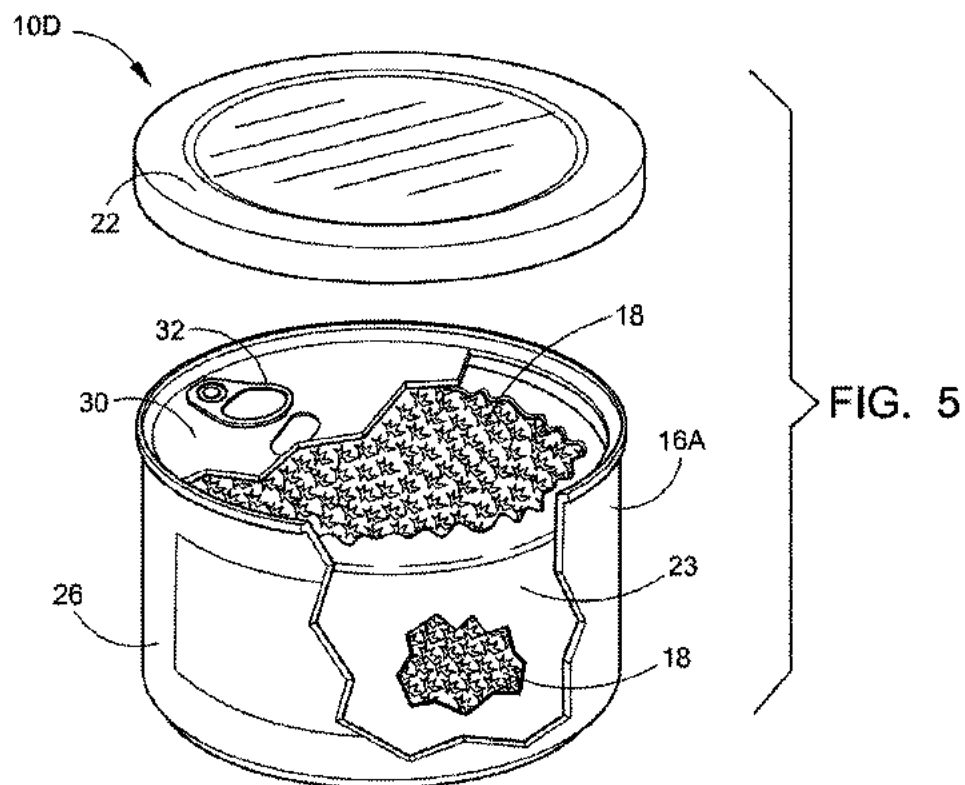


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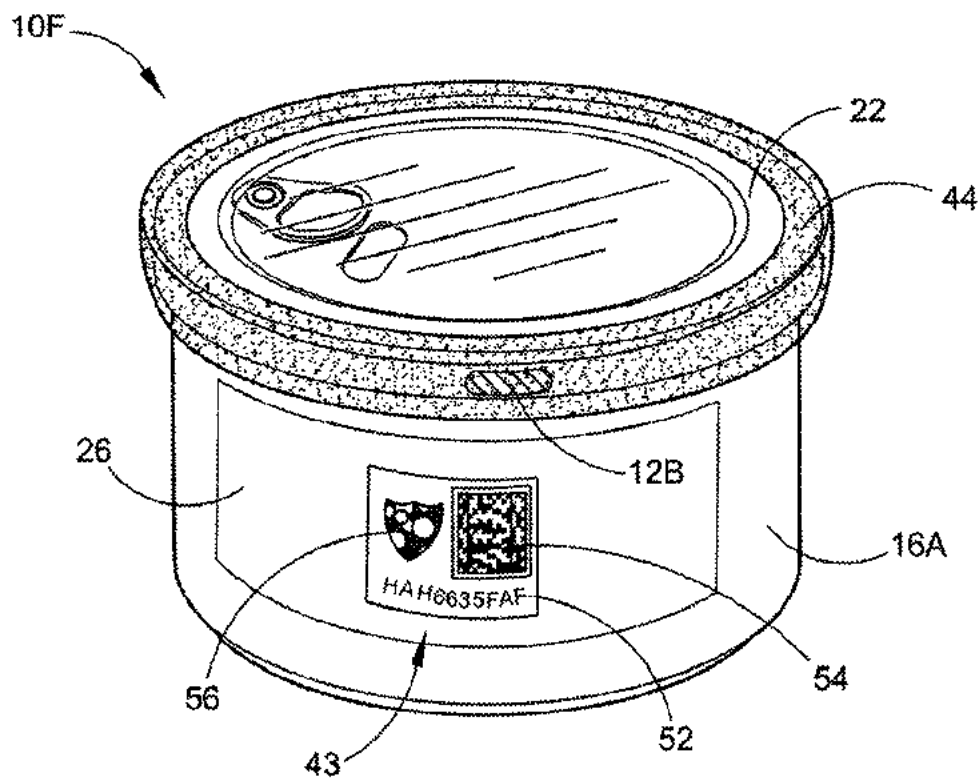


FIG. 7

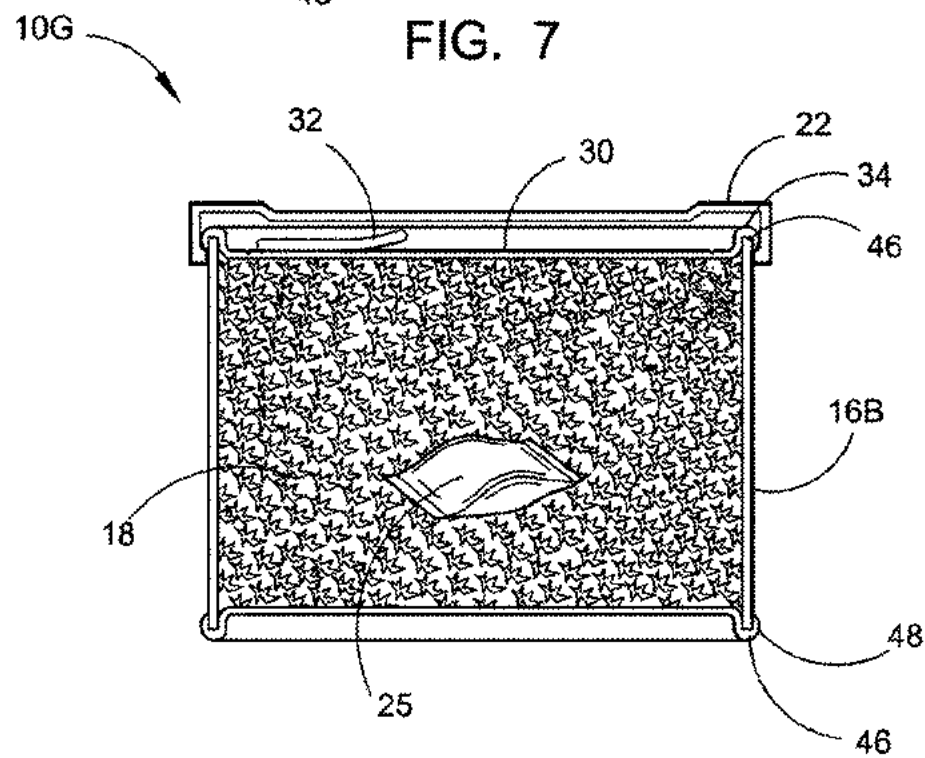


FIG. 8

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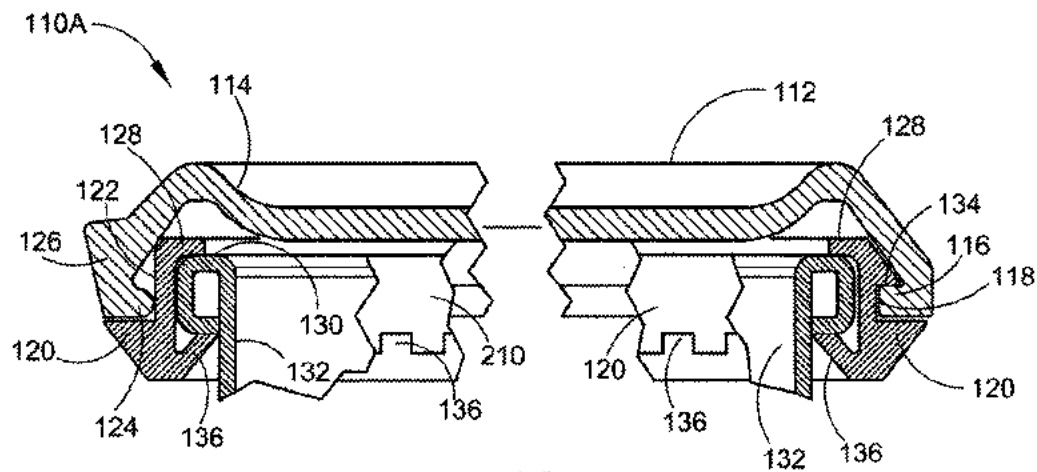


FIG. 9

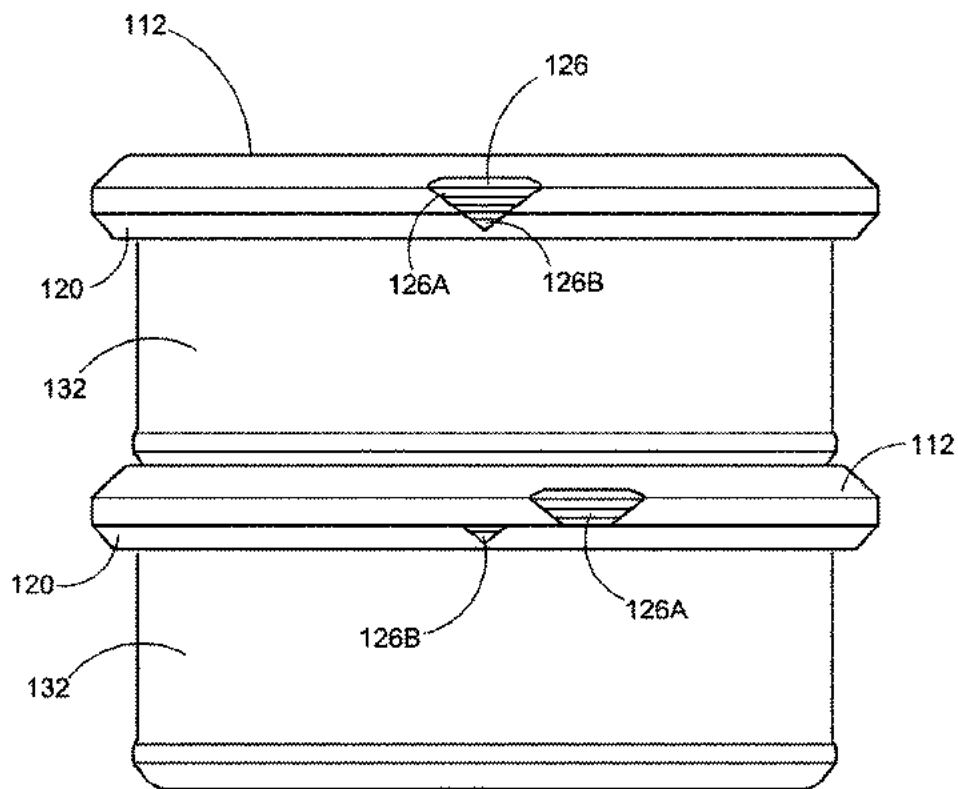
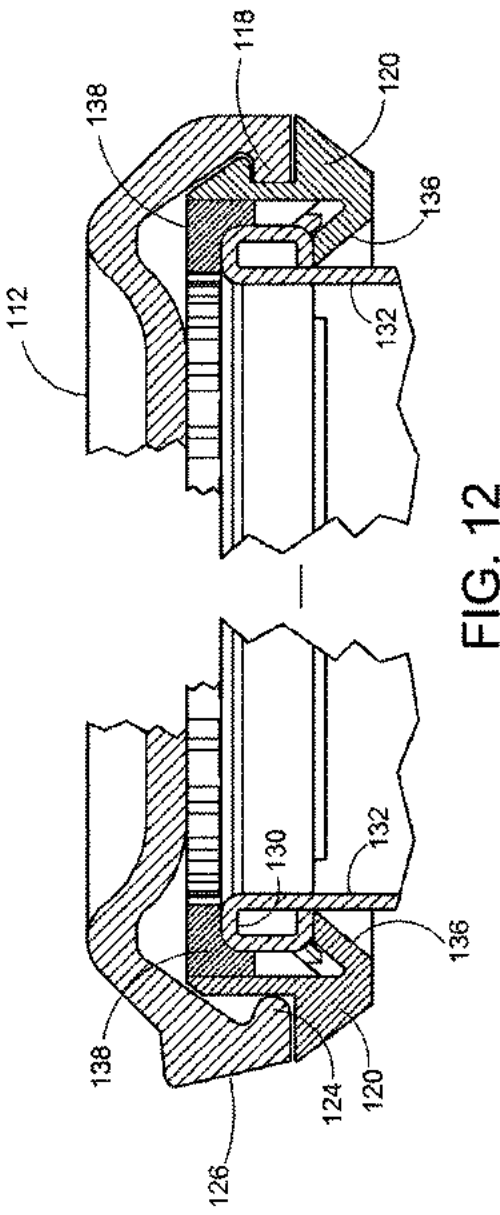
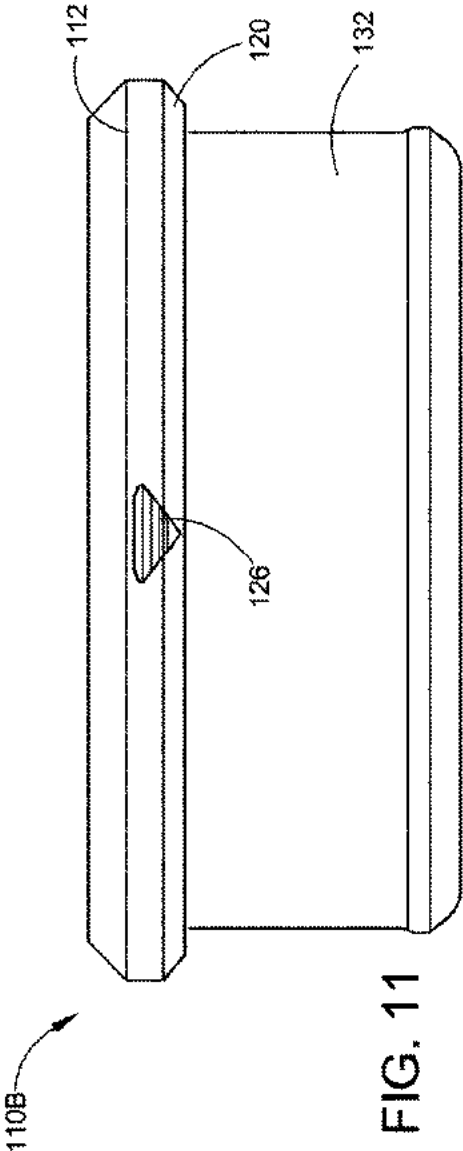


FIG. 10



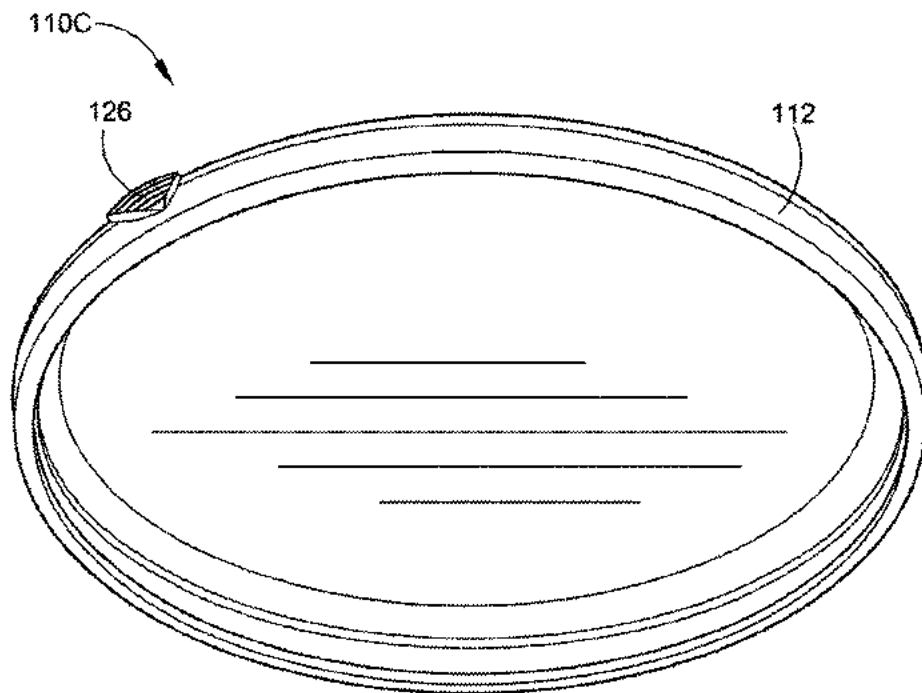


FIG. 13

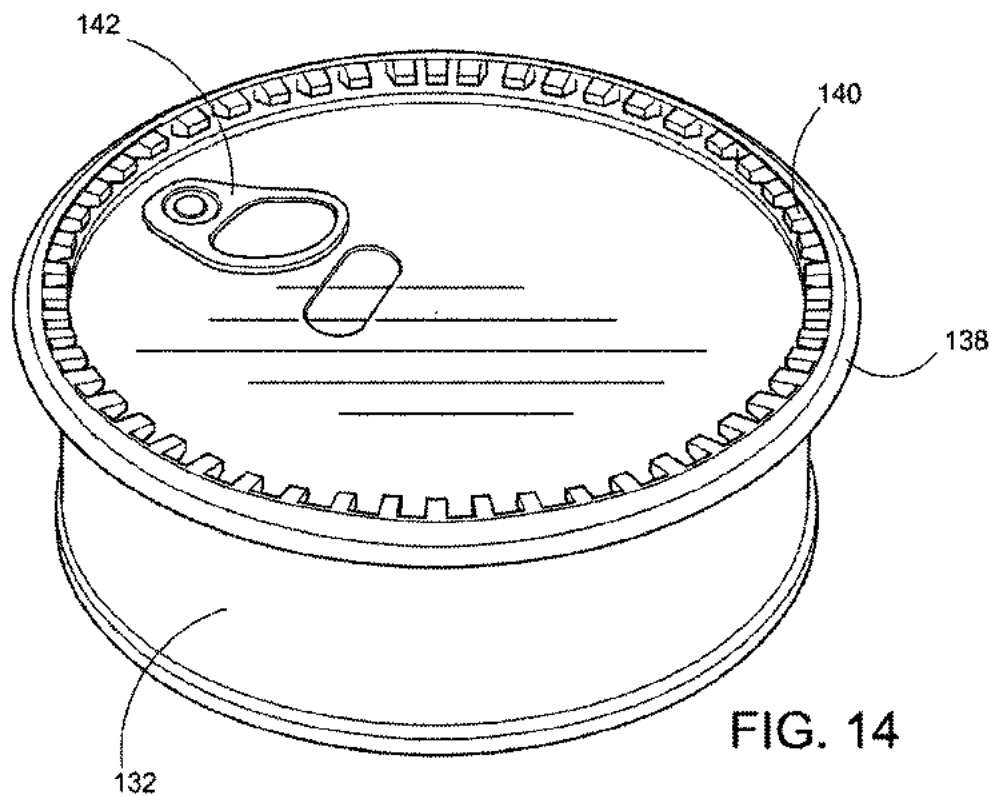


FIG. 14

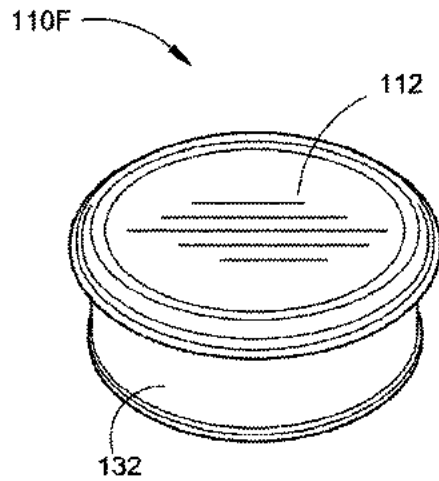


FIG. 15

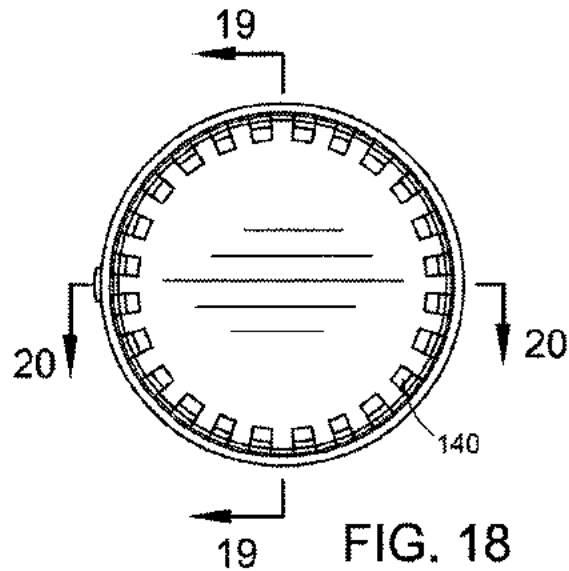


FIG. 18

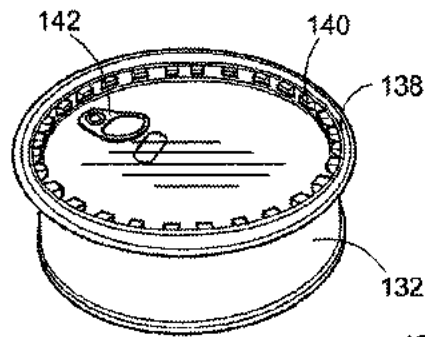


FIG. 16

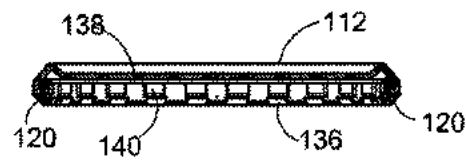


FIG. 19

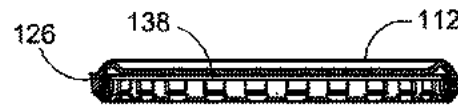


FIG. 20

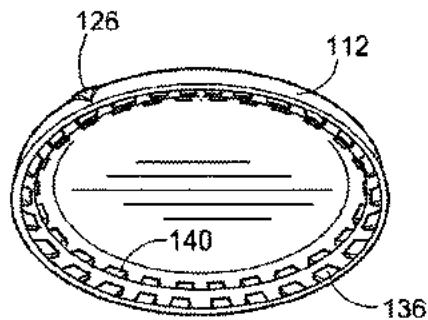


FIG. 17

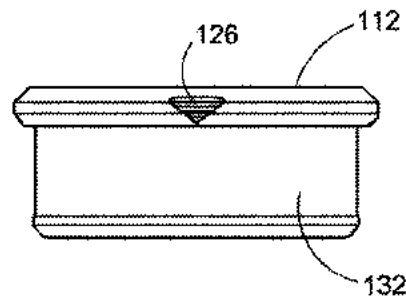


FIG. 21

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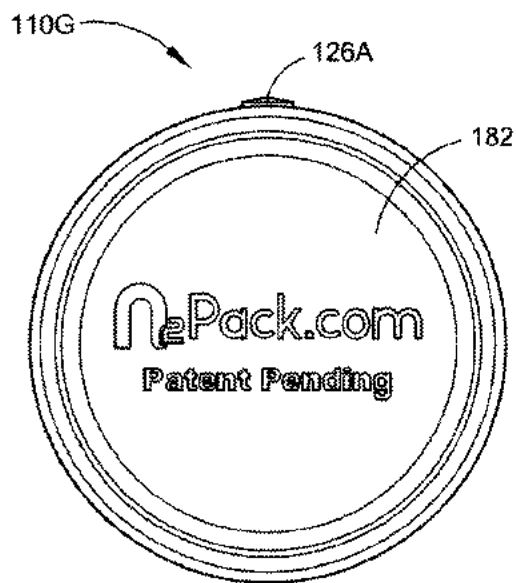


FIG. 22

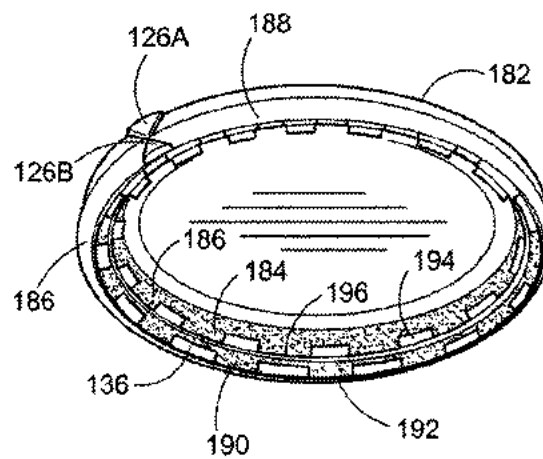


FIG. 23

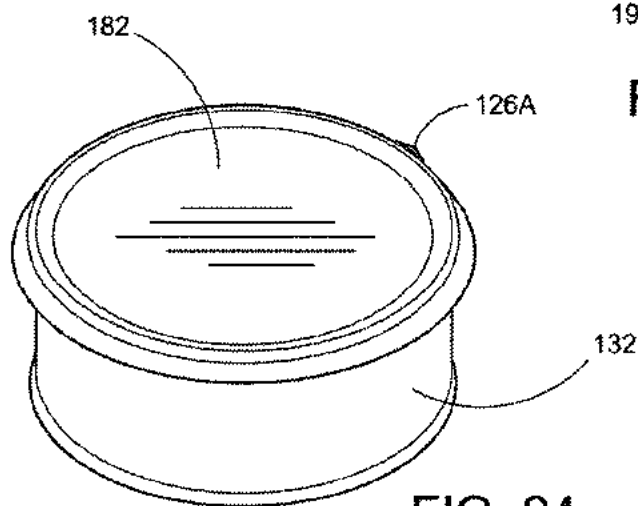


FIG. 24

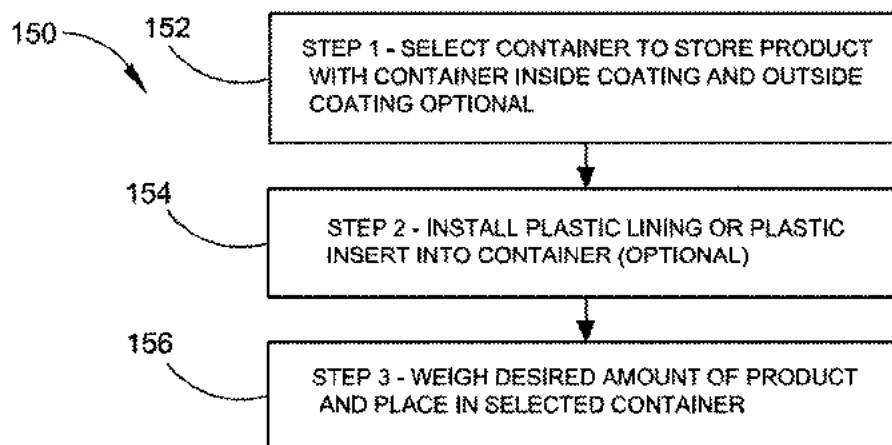


FIG. 25

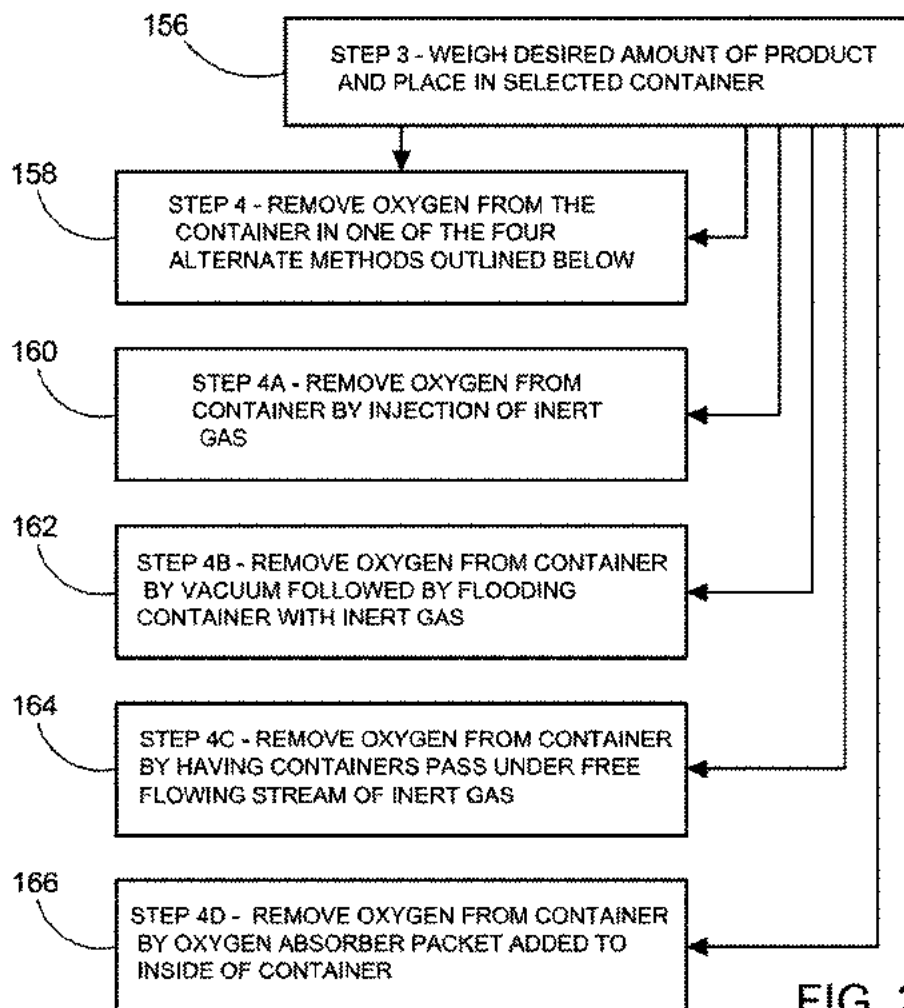


FIG. 26

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RE-SEALABLE CONTAINER FOR A CONTROLLED SUBSTANCE HAVING A CHILD RESISTANT LID

FIELD OF THE INVENTION

This application provides a re-sealable container for storing, preserving, identifying, tracking and transporting a federally controlled substance having a child resistant and senior friendly lid, and a process for identifying and tracking federally controlled substances within the re-sealable containers. In particular, the re-sealable federally controlled substance containers include a two-piece child resistant lid and a 2-factor authentication identification tag, as well as a microchip for identifying the re-sealable container controlled substance contents and tracking the container. Controlled substance contents within, the re-sealable containers are optimized for long term storage by removal of the oxygen therein, and the containers and contents can be readily identified, detected, tracked and traced after being filled with a federally controlled substance.

BACKGROUND OF THE INVENTION

A controlled substance is generally a drug or chemical whose manufacture, possession, or use is regulated by a government. Controlled substances are substances that are the subject of legislative control. This may include illegal drugs and prescription medications. In the United States for example, the Controlled Substances Act (or CSA) was passed by the 91st US Congress as Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970 and signed into law by President Richard Nixon. The CSA is the federal US drug policy under which the manufacture, importation, possession, use and distribution of controlled substances is regulated. In the US, the Drug Enforcement Administration (DEA) is responsible for suppressing illegal drug use and distribution by enforcing the Controlled Substances Act.

Section 812 of the Controlled Substances Act (21 U.S.C. § 801et seq.) (CSA) lists substances which were controlled in 1970 when the law was enacted. Since then, approximately 160 substances have been added, removed, or transferred from one schedule to another. The current official list of controlled substances can be found in section 1308 of the most recent issue of Title 21 Code of Federal Regulations (CFR) Part 1300 to end (21 CFR § 1308) and the final rules which were published in the Federal Register subsequent to the issuance of the CFR. The following link contains a full listing of the current federally Controlled Substances defined by the DEA, as of Jan. 5, 2018: https://www.deadiversion.usdoj.gov/schedules/orangebook/c_cs_alp-ha.pdf.

This list describes the basic or parent chemical and do not describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may be controlled substances. These lists are intended as general references and are not comprehensive listings of all controlled substances. Please note that a substance need not be listed as a controlled substance to be treated as a Schedule I substance for criminal prosecution. A controlled substance analogue is a substance which is intended for human consumption and is structurally or pharmacologically substantially similar to or is represented as being similar to a Schedule I or Schedule II substance and is not an approved medication in the United States. (See 21 U.S.C. § 802(32)(A) for the definition of a controlled substance analogue and 21 U.S.C. § 813 for the schedule).

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Drugs, substances, and certain chemicals used to make drugs are classified into five (5) distinct categories or schedules depending upon the drug's acceptable medical use and the drug's abuse or dependency potential. The abuse rate is a determinate factor in the scheduling of the drug; for example, Schedule I drugs are considered the most dangerous class of drugs with a high potential for abuse and potentially severe psychological and/or physical dependence. As the drug schedule changes—Schedule II, Schedule III, etc., so does the abuse potential—Schedule V drugs represents the least potential for abuse. A Listing of drugs and their schedule are located at Controlled Substance Act (CSA) Scheduling or CSA Scheduling by Alphabetical Order. These lists describe the basic or parent chemical and do not necessarily describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may also be classified as controlled substances. These lists are intended as general references and are not comprehensive listings of all controlled substances.

Note that a substance need not be listed as a controlled substance to be treated as a Schedule I substance for criminal prosecution. A controlled substance analogue is a substance which is intended for human consumption and is structurally or pharmacologically substantially similar to or is represented as being similar to a Schedule I or Schedule II substance and is not an approved medication in the United States. (See 21 U.S.C. § 802(32)(A) for the definition of a controlled substance analogue and 21 U.S.C. § 813 for the schedule).

Schedule I

Schedule I drugs, substances, or chemicals are defined as drugs with no currently accepted medical use and a high potential for abuse. Schedule I drugs are the most dangerous drugs of all the drug schedules with potentially severe psychological or physical dependence. Some examples of Schedule I drugs are: heroin, lysergic acid diethylamide (LSD), marijuana (cannabis), 3,4-methylenedioxymethamphetamine (ecstasy), methaqualone, and peyote.

Schedule II

Schedule II drugs, substances, or chemicals are defined as drugs with a high potential for abuse, less abuse potential than Schedule I drugs, with use potentially leading to severe psychological or physical dependence. These drugs are also considered dangerous. Some examples of Schedule II drugs are: cocaine, methamphetamine, methadone, hydromorphone (Dilaudid), meperidine (Demerol), oxycodone (OxyContin), fentanyl, Dexedrine, Adderall, and Ritalin.

Schedule III

Schedule III drugs, substances, or chemicals are defined as drugs with a moderate to low potential for physical and psychological dependence. Schedule III drugs abuse potential is less than Schedule I and Schedule II drugs but more than Schedule IV. Some examples of Schedule III drugs are: Combination products with less than 15 milligrams of hydrocodone per dosage unit (Vicodin), Products containing less than 90 milligrams of codeine per dosage unit (Tylenol with codeine), ketamine, anabolic steroids, and testosterone.

Schedule IV

Schedule IV drugs, substances, or chemicals are defined as drugs with a low potential for abuse and low risk of

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dependence. Some examples of Schedule IV drugs are: Xanax, Soma, Darvon, Darvocet, Valium, Ativan, Talwin, and Ambien.

Schedule V

Schedule V drugs, substances, or chemicals are defined as drugs with lower potential for abuse than Schedule IV and consist of preparations containing limited quantities of certain narcotics. Schedule V drugs are generally used for antidiarrheal, antitussive, and analgesic purposes. Some examples of Schedule V drugs are: cough preparations with less than 200 milligrams of codeine or per 100 milliliters (Robitussin AC), Lomotil, Motofen, Lyrica, and Parepectolin.

The transport and sales of federally controlled substances, hereinafter simply referred to as "controlled substances," has generally in the past been handled through pharmaceutical suppliers but with several states looking at the legalized sales of products like Marijuana there is a great need to identify, control, track and document these sales.

Containers carrying controlled substances should be readily identifiable both by sight and odor. Dogs are often used to locate these items, but if they are sealed where the air and moisture in the container is replaced with an inert gas along with a dehumidifying agents before sealing, dogs might not be able to locate these items. Identifying odor materials can be attached directly to the outside of the container or to the label. There are other various ways to identify these containers like colorization of the containers and their labels, bar coding and microchips either on the inside or affixed to the outside.

Problems will definitely arise from the transport of these materials from a state that legalizes it to a state where its possession is still illegal. Clearly identifying these containers will help to alleviate some of these problems. If states that legalize the sales of controlled substances like Marijuana would stipulate that it is only to be sold in an identifiable sealed container, there could be a greater control of its propagation, sales and the state taxes paid. With the legalization and controlled sales, the price would come down so that it would not be profitable for the illegal growing of the products.

Numerous innovations for pharmaceutical products have been provided in the prior art that are described as follows. Even though these innovations may be suitable for the specific individual purposes to which they address, they differ from the present design as hereinafter contrasted. The following is a summary of those prior art patents most relevant to this application at hand; as well as a description outlining the difference between the features of the canning process of controlled substances and the prior art.

U.S. Pat. No. 5,135,144 of David C. Blakley describes a belt worn and readily portable medical supply pouch for holding a supply of drug containers in a temperature stable and contamination resistant environment is disclosed. A substantially rectangular housing fabricated from a thick insulating material comprising a bottom, two side panels, a front and a back panel with an open top. A housing thus formed defines a cavity therein for storing a supply of drug cartridges. A protective panel extending across the opening of the housing and angled downward into the cavity is provided to prevent contamination from entering the cavity, while providing access by the hand of a user through the opening and down into the cavity for retrieving one of the drug containers. The housing is covered inside and out by a water-proof and contamination-resistant nylon material.

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Two belt loop members are affixed to the back panel of the housing for attaching the pouch to the waist belt of a user. An internal pocket inside the cavity of the housing is provided for containing a heating element for heating the interior cavity. An outside auxiliary pocket is attached to the outside surface of the front panel for storing items not requiring an insulated and contamination free environment.

This patent describes a belt worn and readily portable medical supply pouch for holding a supply of drug containers. It does not describe a single sealed container for a controlled substance like Marijuana.

U.S. Pat. No. 5,836,474 Georan Wessberg tells of an invention that relates to a medicament storage device which includes a storage plate having a plurality of storage spaces for storing quantities, such as medicament dosages and a base unit which has a memory and an alarm function. The device is characterized in that the openings of respective storage spaces are provided with a closure means in the form of a long and a short flap which overlap one another and which are either spring mounted or consist of elastic material. The flap overlap regions include indicating means which illustrate in which direction passage has occurred through the opening and/or with detecting means which produce a signal relating to the direction of the last passage through the opening.

This patent tells of an invention that relates to a medicament storage device which includes a storage plate having a plurality of storage spaces for storing quantities, such as medicament dosages. It again does not describe a single sealed container for a controlled substance like Marijuana.

U.S. Pat. No. 5,866,219 of Paul McClure et al. relates to a product information label system having a base member and a foldout medical information pamphlet which is applied to medicinal and drug containers where the foldout pamphlet is resealable for subsequent use.

This patent relates to a product information label system and does not deal with any form of containment means.

U.S. Pat. No. 6,793,081 Jay S. Derman describes a locking neck ring device that is placed over a capped bottle or container and grips the bottle neck ring, and together with a padlock or other securing means, prevents access to the bottle cap. The locking device comprises a clamp member that jackets a capped bottle neck; a cover which fits over the clamp member causing it to clamp on to the neck below the neck ring, and means to hold the clamp member to the cover. Provision is made for attaching a padlock or other securing means which holds the locking ring device in place. The bottle or container cap can then not be accessed for removal. The device is applicable to all sizes of drug containers, wine and liquor bottles for effectively locking access to the container contents.

This patent describes a locking neck ring device that is placed over a capped bottle or container and grips the bottle neck ring. It does not with any specific containment means.

None of these previous efforts, however, provides the benefits attendant with the process of canning a controlled substance and do not mention the use of an inert gas as a means of providing long-term storage. The present process of canning a controlled substance achieves its intended purposes, objects and advantages over the prior art through a new, useful and unobvious combination of method steps and component elements at a reasonable cost and by employing readily available materials.

In this respect, before explaining at least one embodiment of the canning a controlled substance in detail it is to be understood that the process is not limited to just a specific process set forth in the following description or illustrated in

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the drawings. The canning process of controlled substances is capable of having other embodiments and of being applied in various ways. In addition, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting. As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for creating other processes for carrying out the several purposes of the present application. It is important, therefore, that the claims be regarded as including such equivalent construction insofar as they do not depart from the spirit and scope of the present application.

SUMMARY OF THE INVENTION

The principal advantage of the re-sealable container for the storage, preservation, identification, tracking and transport of a federally controlled substance having a child resistant lid is to preserve the contents of the container, control the access to the container, control the humidity in sealed containers, and enable identification of the container contents.

Another advantage of the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is to control the access to the container by including a child resistant lid.

Another advantage of the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is to control the humidity within the sealed container through the use of 2-way humidity control packets.

Another advantage of the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is the option of the removal of the oxygen and moisture prior to sealing, and alternatively, flooding the container with an inert gas prior to sealing.

Another advantage of the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that with an external odor substance, dogs will be able to locate it.

Another advantage of the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that they can have a micro-chip on the inside or outside for product locating.

Another advantage of the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is the use of an electronically readable identification tag on the outside for container content product identification.

Another advantage in the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that a variety of different BPA-free, BPS-free and BPF-free materials are used in the construction of the container.

Another advantage is that unlined metal cans can be used as the re-sealable container for the storage, preservation, identification, tracking and transport of a federally controlled substance when an organic (paper, cloth or rice cake) liner is used in the packing of the container and the organic liner is positioned between the can contents and the metal can and where the organic (paper, cloth or rice cake) liners are constructed of recyclable eco-friendly materials.

Another advantage of the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that an

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inexpensive form container can be made in different sizes and shapes, including metal cans, lined metal cans, plastic containers, etc.

Yet another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is it can use a variety of different child resistant lids that are also senior friendly in that they are difficult for children to open yet relatively easy for seniors to open.

These together with other advantages in the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance, along with the various features of novelty, which characterize the process, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance and its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred and alternate embodiments of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance. There has thus been outlined, rather broadly, the more important features of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance that will be described hereinafter and which will form the subject matter of the claims appended hereto.

The preferred embodiment of re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance will be placing the controlled substance into the preformed metal container with a 2-way humidity control device on the inside and an identification label on the outside. The process will begin by inserting a controlled substance and 2-way humidity control packet, preferably a disc packet device or a pillow-shaped packet device. If a microchip is desired within the container it is put in before inserting the controlled substance. The controlled substance is then sealed inside the container and the container is fitted with a child resistant lid. All of the different configurations of containing the controlled substance within numerous container embodiments, and with numerous child resistant lid configurations will be covered within the scope of this application.

If the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance in an inert atmosphere is desired the container is placed into a vacuum chamber. The chamber doors are closed and a vacuum of approximately 26-29 inches of mercury is drawn on the chamber. This removes all of the atmosphere/oxygen and atmospheric moisture that may be present. The vacuum is then halted, and the chamber is then optionally flooded with gaseous nitrogen. The gas is inert and dry, creating a benign atmosphere inside the container and around the controlled substance. This dry, inert environment now created inside the container will arrest the degradation of the controlled substance. The shelf life/storage time created by this process should give the controlled substance stored inside the container almost an unlimited life regardless of the environment outside the

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container. This application is not limited to gaseous nitrogen. Alternate methods can include liquid nitrogen, oxygen absorbers along with other inert gases such as carbon dioxide, helium, and argon. Any process used to create an inert/benign atmosphere while canning the controlled substances will be covered within the scope of this application.

After the evacuation/flooding process is complete the chamber doors are opened and the container, filled with nitrogen, is pushed out and immediately put through the conventional canning seaming process. The nitrogen gas that is in the container at this time is very heavy, dense, and cold and is not naturally trying to diffuse into the air in the room allowing for a reasonable amount of time to apply a lid and seal the container. An alternate method of packaging would be to simply place the controlled substance in the container with a 2-way humidity control packet and hermetically seal the container.

After the container has been sealed and the child resistant lid placed on the container, an identifying tag can be adhered directly to the container or the container label. If an external microchip or radio frequency identification tag (RFID) is desired it can be adhered to the outside of the can or be incorporated into a plastic removable locking ring around the top of the can. The label can also have an identifying bar code imprinted on it or the bar code can be printed on the can. The preferred identification tag will be electronically readable, will have 2-factor or 3-factor authentication properties, and when read electronically will indicate the contents of the container along with other relevant data about the source, origin, species, brand, net weight, and any number of other characteristics not readily discerned without opening the sealed container.

An alternate embodiment of the of the re-sealable container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance would be the use of an organic (paper, cloth or rice cake) liner inserted within an unlined metal can container. The organic (paper, cloth or rice cake) liner insert would be positioned between the metal can and the controlled substance contents. In this way, a less expensive unlined metal can container may be employed, and the more expensive enamel lined metal can is then optional.

Additionally, a two-piece child resistant lid can be mounted on the container to control access to the re-sealable container after the placement of a controlled substance inside. This child resistant lid will also be senior friendly in that it will be both difficult for children to open but relatively easy for seniors to open.

Furthermore, in the process of canning the controlled substances for maximized preservation, the oxygen may be removed from the re-sealable container during the process in one of four ways: (1) injection into the re-sealable container of inert gas before hermetically seating the container; (2) flooding the re-sealable container with inert gas before sealing the re-sealable container; (3) passing the re-sealable container under a free flowing stream of inert gas before sealing the re-sealable container; and (4) addition of an oxygen absorber packet into the container before sealing the re-sealable container.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of this application, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art. All equivalent relationships to those illustrated in the drawings and described in the specification intend to be encompassed by the present disclosure. There-

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fore, the foregoing is considered as illustrative only of the principles of the container and process for the storage, preservation, identification tracking and transport of a federally controlled substance. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the design to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of this application.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and form a part of this specification, illustrate embodiments of the process of canning a controlled substance and together with the description, serve to explain the principles of this application.

FIG. 1 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating a microchip on the bottom of the can with a 2-way humidity control device on the top of the controlled substance contained by the can, having a re-sealable plastic lid shown above.

FIG. 2 depicts a perspective view of a disc shaped 2-way humidity control device having a plurality of holes therein.

FIG. 3 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the container completely filled with the controlled substance with the plastic lid shown above.

FIG. 4 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the controlled substance on the bottom of the container with a pillow-shaped 2-way humidity control device sealed within the container, having a barcode on the label and the plastic lid shown above.

FIG. 5 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the controlled substance on the bottom of the container with an organic (paper, cloth or rice cake) liner positioned between the container and the controlled substance in the container, and the plastic lid shown above.

FIG. 6 depicts a perspective view of a tamper-resistant easy open lined sealed container configured to contain a controlled substance and enable identification of the internal contents of such container using a standard label with the controlled substance in the lined sealed container.

FIG. 7 depicts a perspective view of a tamper-resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container with the plastic removable locking ring incorporating microchip secured by the plastic removable locking ring and having an electronically readable identification (ID) tag having 3 elements of authentication thereon.

FIG. 8 depicts a cross section of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container with a crimped edge on the bottom as well as the top. It should be understood that a conventional three-part metal can could be used, with or without a pop-top feature

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(if a conventional three-part metal can is used without a tamper-resistant easy open “pop-top” feature, then it would necessitate a can opener be used to open the can to make the contents accessible), also having a pillow-shaped 2-way humidity control device sealed within the container.

FIG. 9 depicts a cross section of the preferred embodiment of the assembled 2-piece child resistant (and senior friendly) can lid in place over the top of the re-sealable container for a controlled substance conventional can.

FIG. 10 depicts a side view of two re-sealable containers with the child resistant (and senior friendly) can lid stacked one on top of the other having the upper can with the two parts of the indicator section in the can opening position and the lower can with the indicator section separated in the can locked position.

FIG. 11 depicts an alternate embodiment of the re-sealable container having a child resistant (and senior friendly) can lid illustrating a side view of a conventional can incorporating the 2-piece child resistant lid.

FIG. 12 depicts a cross section through an assembled alternate embodiment of the re-sealable container having a child resistant container lid illustrating the locking nib section and the can locking member with the addition of a lid section securing unit.

FIG. 13 depicts a bottom perspective view of the top piece of a child resistant lid for a re-sealable container.

FIG. 14 depicts a top view of an alternate embodiment of a re-sealable container illustrating a child resistant lid bottom piece in place on a container having a pop top easy open lid accessible after the child resistant lid is opened.

FIG. 15 depicts a perspective view of another alternate embodiment of the re-sealable container having a child resistant lid on a container.

FIG. 16 depicts a perspective view of the top of a conventional can with pop top opener and the 2-piece lid securing unit in place on top of the re-sealable container.

FIG. 17 depicts a bottom perspective view of the assembled child resistant lid with the 2-piece lid securing unit in place, in accordance with the present invention.

FIG. 18 depicts a bottom plan view of the child resistant lid.

FIG. 19 depicts a cross section of the assembled child resistant lid.

FIG. 20 depicts a cross section of the assembled child resistant lid, illustrating the location of the indicator section on the left side, in accordance with the present invention.

FIG. 21 depicts a side view of a re-sealable container incorporating the child resistant lid.

FIG. 22 depicts a top view of another alternate embodiment of the child resistant lid illustrating a vacuum sealing child resistant container lid.

FIG. 23 depicts a bottom perspective view of the underside of the child resistant vacuum sealing container lid.

FIG. 24 depicts a top perspective view of the top surface of the re-sealable container showing a child resistant vacuum sealing lid on the container.

FIG. 25 illustrates a flow chart of the first three steps, Step 1, Step 2 and Step 3 in the process of tilling a re-sealable container for the storage, preservation, identification, tracking and transport of a federally controlled substance.

FIG. 26 illustrates a flow chart of the last two steps in the process for the storage, preservation, identification, tracking and transport of a federally controlled substance, namely, outlining four methods carrying out Step 4 of removing the oxygen from the container before the re-sealable container is hermetically sealed.

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For a fuller understanding of the nature and advantages of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance, reference should be had to the following detailed description taken in conjunction with the accompanying drawings which are incorporated in and form a part of this specification, illustrate embodiments of the process together with the description, serve to explain the principles of this application.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, wherein similar parts of the re-sealable container and process of containing a controlled substance for preservation and identification is illustrated there is seen in FIG. 1 a perspective view of a conventional pop-top can assembly 10A cut away illustrating the internal microchip 12A in the container with the controlled substance 18 at the bottom of the container 16A. The controlled substance 18 has a 2-way humidity control device 20 on the top portion of the container positioned between the easy Open pop top lid 30 and the controlled substance 18, also illustrating to removed plastic lid 22 above the container 16A. The container 16A will consist of a conventional pressed formed metal can without a crimped edge on the container bottom edge 24. The container 16A will have a label 26 where an external odor substance 28A can be located, or the external odor substance 28B can be adhered to the outside surface of the container 16A. The process of storing the controlled substance in an inert atmosphere is optional at this time. A tamper resistant easy open lid 30, possibly configured in any of numerous configurations, here shown as a pop-top lid 30 with an opening tab 32, which will be sealed to the container top edge 34 of container 16A.

FIG. 2 depicts a perspective view of a disc-shaped 2-way humidity control device 20. The 2-way humidity control device 20 will have a plurality of holes 21 in the top and bottom of the device. 2-way humidity control devices are readily available. Some of the top brands include Boveda, Integra Boost, Humi Flow, D’Addario and Supra-dri, to name a few off the shelf 2-way humidity control packet devices. These 2-way humidity control devices come in a variety of shapes and sizes and can be custom made to control the humidity to within tight percentages, for example between 48% and 52% relative humidity. These 2-way humidity control devices are commonly used to maintain humidity for tobacco products, etc. The anticipated 2-way humidity control devices used in the present invention are disc-shaped and pillow shaped (see FIGS. 4 and 8 below). The optimal humidity level for each controlled substance varies. The 2-way humidity control devices are inserted into the re-sealable container for a controlled substance to maintain the humidity therein at an optimal level for each controlled substance contained.

FIG. 3 depicts a perspective view of a re-sealable tamper resistant easy open container 10B for a controlled substance, configured to contain a controlled substance 18 and to enable identification of the internal sealed contents of such a re-sealable container 10B using a standard label 26 affixed to the outside surface of the re-sealable container 10B. This cut away view illustrates the re-sealable container 10B filled with the controlled substance 18 and having a plastic lid 22 above container 16A. After the re-sealable container 10B is

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opened, by removal of easy open lid 30 by pulling on tab 32, the plastic lid 22 can then be placed on the top of the open container 16A.

FIG. 4 depicts a perspective view of a tamper resistant easy open container 10C configured to contain a controlled substance 18 and enable identification of the internal contents using a label 26 having a barcode 40 thereon. Re-sealable container 10C has been cut away illustrating the controlled substance 18 on the bottom of the container 16A with a pillow-shaped 2-way humidity control device placed on top of the controlled substance 18. The plastic lid 22 above the container 16A can be used to re-seal the container after it has been opened by removing the pop top easy open lid 30.

FIG. 5 depicts a perspective view of a re-sealable container 10D having tamper resistant easy open lid 30, with a pull tab 32. This re-sealable container 10D is an unlined metal can 16A for containing a controlled substance. The standard label 26 will enable identification of the internal contents of such container 10D. This cut away view illustrates the controlled substance 18 on the bottom of the container 16A with an organic (paper, cloth or rice cake) liner 23 inserted between the controlled substance 18 and the metal can 16A such that the controlled substance does not come in direct contact with the metal can container 16A. In this way, a container having no pre-coated liner, such as an enamel lining, can be used. This represents a significant cost savings as unlined metal can are very inexpensive, and organic (paper, cloth or rice cake) liners are also inexpensive.

FIG. 6 depicts a perspective view of a re-sealable container 10E having tamper resistant easy open lid 30, with a pull tab 32. This re-sealable container 10E is a lined metal can 16A for containing a controlled substance. The standard label 26 will enable identification of the internal contents of such container 10D. This cut away view illustrates the controlled substance 18 on the bottom of the container 16A with an enamel liner 42 coating the entire inner surface of the metal container 16A such that the controlled substance does not come in direct contact with the metal can when inside the container 16A. Alternatively, a sealed bag may be used within the container to accomplish the same goal of keeping the controlled substance from direct contact with the metal can.

FIG. 7 depicts a perspective view of a re-sealable container 10G having a tamper resistant easy open lid 30 and pull tab 32. Re-sealable container 10G has two ways of identifying and tracking the contents of the container: (1) adhered to a standard label 26 is a 2-factor authentication system 43; and (2) an external microchip 12B secured by a plastic removable locking ring 44 over the plastic lid 22 and the top edge 34 of the container 16A. The microchip 12B is electronically readable and can be used to track the container.

The 2-factor authentication and identification (ID) tag 43 contains three elements for positively identifying the container and its contents. These three factors include a QR code 54, a serial number 52 and a unique image 56 comprising a shape symbol (here a shield shape) having random three dimensional (3D) structures in each symbol forming an irreproducible holographic fingerprint. The QR code is readable by electronic means and can reveal the container contents and other data such as source, date, brand, origin, etc. of the container contents. A model for the preferred system and method of authentication is covered in US pending patent application publication US 2017/028074 A1, Applicant Authentic Vision GMBH, by inventors Thomas Weiss and Thomas Bergmüller. Electronic reading of the ID

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tag 43 authenticates and verifies the contents and reveals other relevant data about those contents. The re-sealable container 10F could also be tamper proof and configured to contain a controlled substance and enable identification as well as tracking of the internal contents of such a re-sealable container 10F with the plastic removable locking ring 44 over the plastic lid 22 and the top edge 34 of the container 16A incorporating the external microchip 12B. Using both of these methods together act as redundant ID systems.

FIG. 8 depicts a cross section of re-sealable container 10F additionally having a pillow-shaped 2-way humidity control device 25 placed within the container with the controlled substance therein. This three-part tamper resistant lid 22 easy open container 10G is configured to contain a controlled substance and enable identification of the internal contents using the methods described for FIG. 7 (unique ID tag 43 and microchip 124 not shown). Such re-sealable container 10G has a crimped edge 46 on the container bottom edge 48 as well as a crimped edge 34 on the container top edge.

FIG. 9 depicts the preferred embodiment of the re-sealable container for a controlled substance with a child resistant and senior friendly) can lid 110A. There is seen in FIG. 9 a cross section view of the upper portion of a re-sealable container 10A illustrating the preferred embodiment of the child resistant can lid indicating the lid 112 with a contoured surface 114 to secure additional cans for stacking. A locking inner ring 116 of the lid 112 engages within the external locking trough 118 in the circumference of the can locking member 120 with a relief area 122 to access the nib section 124 of the lid 112 for the removal of the lid 112 when an upward pressure is applied at the lifting indicator section 126. The top surface 128 of the can locking member 120 rests on the rim 130 of the can 132 and is held in place by the upper surface 134 of the external locking trough 118. A series of restraining teeth 136 around the lower inner surface of the of the can locking member 120 are bent up when the when the locking member 120 is forced over the top rim 130 of the can 132 to engage under the lip of the can 130.

FIG. 10 depicts a side view of two stacked re-sealable containers 132 with the lower container 132 having the two sections of the lifting indicator section 126, the upper lifting indicator section 126A and the lower lifting indicator section 126B merged together in the opening position. The lower can has the lid 112 rotated so that indicator section 126A is moved to the right putting the lid 112 in the locking or locked position.

FIG. 11 depicts a side view of the re-sealable container 110B constructed of a conventional metal can 132 incorporating an alternate embodiment of the child resistant (and senior friendly) can lid 110B.

FIG. 12 depicts a cross section through the assembled alternate embodiment of the child resistant can lid 110B with the conventional can 132 having a locking nib 124 and the can locking member 120 with the addition of a securing unit 138.

FIG. 13 depicts a bottom perspective bottom view of another alternate embodiment of the top piece of a two-piece child resistant can lid 110C lid 112 illustrating the upper lifting indicator section 126A.

FIG. 14 depicts a top perspective view of the re-sealable container constructed from a conventional metal can 132 with an easy open "pop-top" opener 142 and the securing unit 138 in place, having numerous teeth 140.

FIG. 15 depicts a re-sealable container 110F in a top perspective view illustrating an alternate embodiment of the

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child resistant (and senior friendly) can lid **112** positioned on top of the container **110F** and fully assembled and mounted on the container **110F** with the lid **112** on a conventional can type of container **132**.

FIG. **16** depicts a perspective view of the top of a conventional can **132** with pop-top opener **142** and the securing unit with the tops of the **124** wedge teeth **140** in can locking member **120**.

FIG. **17** depicts a bottom view of an assembled alternate embodiment of the child resistant (and senior friendly) can lid for use on re-sealable container **110F** with the securing unit **138** illustrating the **124** restraining teeth **136** and the **124** wedge teeth **140**.

FIG. **18** depicts a bottom view of an assembled alternate embodiment of the child resistant (and senior friendly) can lid for use on re-sealable container **110F** illustrating the location of the wedge teeth **140**.

FIG. **19** depicts a cross section of the assembled an assembled alternate embodiment of the child resistant (and senior friendly) can lid for use on re-sealable container **110F** showing the lid **112**, the can locking member **120** and the restraining teeth **136**.

FIG. **20** depicts a cross section of the assembled an assembled alternate embodiment of the child resistant (and senior friendly) can lid for use on re-sealable container **110F** illustrating the location of the indicator section **126** on the left side.

FIG. **21** depicts a cross section of the assembled an assembled alternate embodiment of the child resistant (and senior friendly) can lid for use on re-sealable container **110F** illustrating the indicator section **126** merged into the opening or unlocked position, ready to be opened.

FIG. **22** depicts a top view of an assembled alternate embodiment of the child resistant (and senior friendly) can lid for use on re-sealable container **110G** illustrating the configuration of a vacuum sealing lid **182** having an upper lifting indicator section **126A**.

FIG. **23** depicts a bottom perspective view of a vacuum sealing lid **182** with a rubber sealant coating **184** applied to the lid inner surface **186**, with the vacuum sealing can locking member **188** having the rubber sealant **190** applied on the inner surface of the edge **192**. The inner surface of the vacuum sealing can locking member **188** has a plurality of restraining teeth **136** on the lower edge **192** and a plurality of upper supporting teeth **194** on the upper edge **196**.

FIG. **24** depicts a perspective view of the top surface of the vacuum sealing lid **182** mounted on a re-sealable container for controlled substances, here incorporated onto a conventional metal can **132**. It is also anticipated that the re-sealable container could be constructed of thermoplastics. Plastic containers may be coated or uncoated, lined or unlined.

Example of Use of the Re-Sealable Container

Small quantity usage is pervasive in federally controlled substances of all kinds. Because of the varying availability of packaging sizes, consumers are able to only open and expose small amounts of product at a time, thus eliminating the exposure of the product inside to the elements. This allows the consumer to keep and store their products for longer periods of time instead of utilizing them in a shorter period of time because of the shorter shelf life of exposed product. For example, with Marijuana: An eighth of an ounce of marijuana. fits neatly into a nitrogen packed container, which is approximately the same size as a typical container of chewing tobacco. A plastic over cap is applied

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to the containers. Four of these containers can be stacked and held together by a plastic shrink sleeve if desired. While the total amount of Marijuana in possession (in those US states which have legalized it) is currently $\frac{1}{2}$ ounce, only a $\frac{1}{8}$ th ounce is exposed to the elements at any given time. The other $\frac{3}{8}$ th ounce is sealed and stored tightly in the remaining containers, and stays as fresh as when it was first introduced into the containers for storage and preservation. All re-sealable containers for a controlled substance will come with a pull top tamper resistant lid below a child resistant lid affixed to the top of the container. These re-sealable containers may be made of metal or plastic, coated or uncoated, lined or unlined. Organic (paper, cloth or rice cake) liner inserts and or resealable bags may also be used.

Example of the Canning Process

FIG. **25** illustrates a flow chart of the first three steps in the process **150** for the storage, preservation, identification, tracking and transport of a federally controlled substance. Step **1** **152** includes the proper size container is selected to store the marijuana, a container that fits the portion to be processed. The container can be a metal/tin can with a vinyl or enamel coating inside. A coated container is preferred. This coating will shield the product from coming in contact with the bare metal of the can and possibly reacting with the metal. The outside of the container could be coated with either a vinyl or an epoxy to prevent rust. An organic (paper, cloth or rice cake) liner insert may be used with unlined metal cans.

A plastic lined can is preferred, to include but not limited to a plastic lining or coating on the inside of the can to protect the product from coming in contact with bare metal/tin and causing a reaction, for example, transfer of a metallic taste to the product and/or having moist product coming in direct contact with an metal material. Furthermore, when plastic containers are used, it is preferred to use bisphenol A (BPA), bisphenol S (BPS) and bisphenol F (BPF) free plastic materials making up the container. BPA is found in polycarbonate plastics and resin that store foods and beverages, such as water bottles. Scientific studies indicate that BPA may act as an endocrine disruptor in the human body. BPS is a common replacement for BPA in plastics, and it too, has been linked to health risks. BPF is a BPA substitute that has been shown to act as an endocrine disruptor, in a similar manner as BPA.

Step **2** **154** includes a plastic lining or insert can be installed, this coating or lining will shield against the product coming in contact with the bare metal of the can, and possibly reacting with the metal. Containers can also be made of composite material, (a composite can), a plastic can, a plastic pail or a plastic bucket.

Step **3** **156** includes the product, (in this example, marijuana), is then weighed and placed in the can, or weighed in the can, (minus the tare weight of the can).

FIG. **26** illustrates a flow chart of the last two steps in the process **150** for the storage, preservation, identification, tracking, and transport of a federally controlled substance. Here again, Step **3** **156** includes the product (for example, marijuana), is then weighed and placed in the can, or weighed in the can, (minus the tare weight of the can). Following Step **3** **156**, Step **4** **158** includes the can or container is now run through a process to remove the oxygen from the container. This is accomplished through the use of inert gases, to include but not limited to the insertion of liquid or gaseous inert gases, i.e. nitrogen, carbon dioxide,

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helium, etc., to create a benign, dry, non-reactive atmosphere inside the can to stabilize and preserve the product.

This is achieved in one of four alternative method steps as described below:

Method Step 4A 160 includes removing the oxygen by having the can/container pass under a system that injects inert liquid gas (nitrogen preferred). The liquid is cold and dense. It immediately begins to gasify, thus displacing the atmospheric oxygen from the can/container. Before the gasification is complete, the can is sealed with a "pop top" lid and a seam is completed, leaving a nitrogen atmosphere inside the can/container.

This process can also be achieved by Step 4B 162 by placing the can, or cans, or containers, in a vacuum chamber, evacuating the chamber and then flooding the chamber with gaseous nitrogen or any inert gas, then quickly sealing (seaming) the cans before the colder dense gas warms and tries to escape.

A third method of replacing the oxygen is shown in Step 4C 164 which is to allow the filled cans to pass under a free falling, free flowing stream of nitrogen as it travels to the machine to be lidded and seamed. In lieu of injecting a measured quantity of liquid nitrogen in to the can as it moves toward the lidder/seamer, it is now replaced with just passing under a falling stream of cold, dense nitrogen. This achieves an oxygen removal displacement. This method is effective but allows much of the nitrogen to be wasted in the surrounding area.

A fourth method, as illustrated in Step 4D 166 would be to place an oxygen absorber packet inside the can prior to lidding. This will turn the available oxygen inside the can into iron oxide, thus effectively removing the oxygen in the can/container.

In summary, there are four basic configurations in which the federally controlled substances could be canned, (1) canned within a lined re-sealable container, loosely alone with no insert; (2) canned within a lined re-sealable container with a 2-way humidity control device inserted; (3) canned with an unlined can having an organic (paper, cloth or rice cake) insert, and (4) canned with an unlined can having an organic (paper, cloth or rice cake) insert, and additionally having a 2-way humidity control device inserted. Alternatively, the contents may be pre-packaged in a sealed plastic bag or foil envelope. Finally, bulk amounts of controlled substances could be stored and transported in large sealed re-sealable containers such as polymer pails, with and without 2-way humidity control devices and with or without organic (paper, cloth or rice cake) inserts.

Furthermore, in summary, in the process of canning the federally controlled substances for long term storage and maximized preservation, the oxygen is removed from the container during the process in one of four ways: (1) injection into the container of inert gas before sealing the container (2) flooding the container with inert gas before sealing the container; (3) passing the container under a free flowing stream of inert gas before sealing the container; and (4) addition of an oxygen absorber packet into the container before sealing the container.

Moreover, it is anticipated that many other federally controlled substances such as pharmaceuticals will be stored, preserved, identified, tracked and transported using the present invention and inventive method. This is to include but not limited to using the same process for other drugs, pills, powders, and liquids to stabilize and preserve, giving them a longer shelf life, as some medications degrade rapidly in the presence of atmospheric moisture, oxygen, and light. This process is to include possible refrigeration of

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the cans to slow degradation of the products inside, in some cases even freezing the canned product. In the case of marijuana, low temperatures are desirable, but freezing will harm the product. It is also anticipated that sublimation or "freeze-drying" may be employed with a variety of controlled substances that do not lose potency when freeze-dry processes are used. Sublimation is another method of stabilizing controlled substance products. If done correctly, the moisture of the product inside the container is removed and the natural breakdown or degradation of the container contents is arrested. This prevents the need for adding chemical preservatives and it makes refrigeration optional.

In addition, the present invention is directed at solving problems in scent detection and/or scent suppression for containers of federally controlled substances. Depending on the desired situation, when properly filled, no marijuana is allowed to come in contact with the outside of the container, and when properly sealed, the product cannot be detected by drug-sniffing dogs. If detection is desired, the container simply needs to come in contact with the marijuana on the outside of the container. The scent lingers and drug sniffing does can detect/locate the product. Alternatively, the previously described label having an odor adhered portion can be employed to enhance the detection of the federally controlled substance contents within the container so labeled.

Further, the purpose of the foregoing abstract is to enable the US Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

We claim:

1. A re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance comprising:

- (a) a one or more-piece airtight container having an outer portion having an exterior surface and an inner portion having an interior surface, an upper portion and a lower portion, configured for containing a federally controlled substance;
- (b) a 2-way humidity control device inserted within said airtight container;
- (c) a re-sealable two-piece child resistant lid affixed to said upper portion of said airtight container; and
- (d) identifying indicia including an electronically readable identification tag located on the outer portion exterior surface of said airtight container, for identifying and tracking the contained federally controlled substance contents within said container;

wherein said airtight container configured for containing a federally controlled substance is securely re-sealable using said child resistant lid, after the sealed airtight container is opened to access the controlled substance within said airtight container.

2. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said one or more-piece airtight container includes a metal container having an organic insert between the filled controlled substance and the metal.

3. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled

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trolled substance according to claim 1, wherein said one or more-piece airtight container includes a plastic composite container.

4. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein a one-piece tamper resistant lid is affixed to said upper portion of said airtight container directly below said re-sealable two-piece child resistant lid and said one-piece tamper resistant lid includes a pop-top one-piece tamper resistant easy open lid with a pull tab.

5. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said 2-way humidity control device inserted within said airtight container is disc-shaped and pillow-shaped.

6. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein an external odor from a federally controlled substance is adhered during the container controlled substance filling process, for the purpose of allowing federal agencies, drug-sniffing dogs, and others to detect the presence of the federally controlled substance contents contained therein.

7. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said identifying indicia is located affixed to said outer portion of said airtight container and comprises an electronically readable microchip, enabling tracking and identification of the re-sealable container contents.

8. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said identifying indicia located on said outer portion exterior surface for identifying the contained federally controlled substance contents within said container includes an electronically readable 2-factor authentication identification tag.

9. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 8, wherein said electronically readable 2-factor authentication identification tag further includes a QR code, a serial number and a random shaped holographic symbol having random three-dimensional (3D) holographic structures in each random shaped holographic symbol, forming an irreproducible holographic fingerprint.

10. The re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said re-sealable two-piece child resistant lid includes:

- a contoured upper surface to secure additional cans for stacking;
- a locking inner ring having a plurality of restraining teeth which engage with an external locking trough located on the circumference of a locking member having a relief area to access a nib section; and
- an indicator section having an upper indicator section and a lower indicator section, which when aligned allow opening of the container, but when not aligned lock the container;

wherein removal of the lid is accomplished when an upward pressure is applied by lifting said upper indicator section when said upper indicator section and said lower indicator section are aligned.

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11. A method for making a re-sealable container for the storage, preservation, identification, tracking and transport of a federally controlled substance, comprising the steps of:

- (a) providing a one or more-piece airtight container having an outer portion having an exterior surface and an inner portion having an interior surface, an upper portion and a lower portion, configured for containing a federally controlled substance;
- (b) inserting a 2-way humidity control device within said airtight container;
- (c) affixing a re-sealable two-piece child resistant lid to said upper portion of said airtight container; and
- (d) applying identifying indicia including an electronically readable identification tag located to the outer portion exterior surface of said airtight container, for identifying and tracking the contained federally controlled substance contents within said container;

wherein said airtight container configured for containing a federally controlled substance is securely re-sealable using said child resistant lid, after the sealed airtight container is opened to access the controlled substance within said airtight container.

12. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 11, wherein said one or more-piece airtight container includes a metal container having an organic insert between the filled controlled substance and the metal.

13. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 11, wherein said one or more-piece airtight container includes a plastic composite container.

14. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 11, wherein a one-piece tamper resistant lid is affixed to said upper portion of said airtight container directly below said re-sealable two-piece child resistant lid and said one-piece tamper resistant lid includes a pop-top one-piece tamper resistant easy open lid with a pull tab.

15. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 11, wherein said 2-way humidity control device inserted within said airtight container is disc-shaped and pillow-shaped.

16. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 11, wherein an external odor from a federally controlled substance is adhered during the container controlled substance filling process, for the purpose of allowing federal agencies, drug-sniffing dogs, and others to detect the presence of the federally controlled substance contents contained therein.

17. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 11, wherein said identifying indicia is located affixed to said outer portion of said airtight container and comprises an electronically readable microchip, enabling tracking and identification of the re-sealable container contents.

18. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 11, wherein said identifying indicia located on said outer portion exterior surface for identifying the contained federally controlled substance contents contained therein.

trolled substance contents within said container includes an electronically readable 2-factor authentication identification tag.

19. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 18, wherein said electronically readable 2-factor authentication identification tag further includes a QR code, a serial number and a random shaped holographic symbol having random three-dimensional (3-D) holographic structures in each random shaped holographic symbol, forming an irreproducible holographic fingerprint.

20. The method for making a re-sealable container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 11, wherein said re-sealable two-piece child resistant lid includes:

- a contoured upper surface to secure additional cans for stacking;
 - a locking inner ring having a plurality of restraining teeth which engage with an external locking trough located on the circumference of a locking member having a relief area to access a nib section; and
 - an indicator section having an upper indicator section and a lower indicator section, which when aligned allow opening of the container, but when not aligned lock the container;
- wherein removal of the lid is accomplished when an upward pressure is applied by lifting said upper indicator section when said upper indicator section and said lower indicator section are aligned.

* * * * *

EXHIBIT E

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Declarations under Rule 4.17:

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[Continued on next page]

(54) Title: CONTAINER FOR FEDERALLY CONTROLLED SUBSTANCE

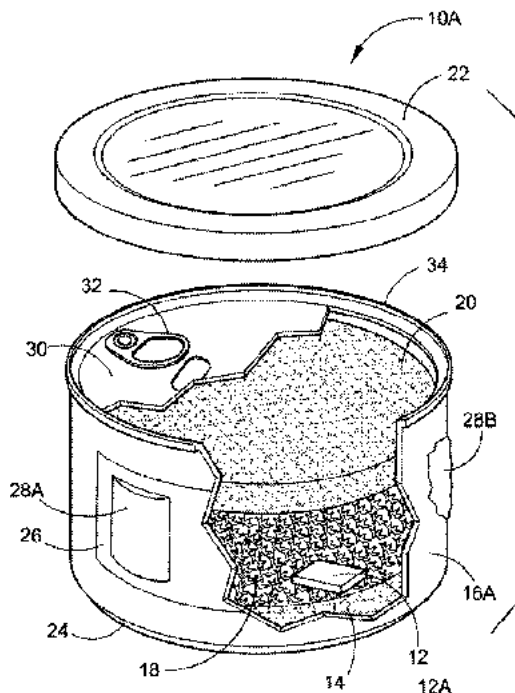


FIG. 1

(57) Abstract: The present application provides a container for storage, preservation, identification, tracking and transport of a federally controlled substance comprising (10): (a) a one or more piece airtight container having an exterior surface and an interior surface, an upper portion and a lower portion (16A), configured for containing a federally controlled substance; (b) an inner coating liner lining said interior surface of said airtight container; (c) a one piece tamper resistant easy open lid (30) affixed to said upper portion of said airtight container; and (d) identifying indicia (26) located on the exterior surface for identifying the contained federally controlled substance contents within said container; wherein said airtight container configured for containing a federally controlled substance (10), has the atmosphere evacuated (158) and the container filled with an inert gas before the airtight container is hermetically sealed, containing and preserving a federally controlled substance inside.

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CONTAINER FOR FEDERALLY CONTROLLED SUBSTANCE

FIELD OF THE INVENTION

[0001] This application provides a unique container for storing, preserving, identifying, tracking and transporting a federally controlled substance and a canning process for federally controlled substances where the cans enamel lined, atmosphere evacuated, inert gas filled, and hermetically sealed, and the federally controlled substance contents are clearly identified in a number of different ways. In particular, the federally controlled substance containers are optimized for long term storage and can be readily detected, tracked and traced when filled with a federally controlled substance.

[0002] A controlled substance is generally a drug or chemical whose manufacture, possession, or use is regulated by a government. Controlled substances are substances that are the subject of legislative control. This may include illegal drugs and prescription medications. In the United States for example, the Controlled Substances Act (or CSA) was passed by the 91st US Congress as Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970 and signed into law by President Richard Nixon. The CSA is the federal US drug policy under which the manufacture, importation, possession, use and distribution of controlled substances is regulated. In the US, the Drug Enforcement Administration (DEA) is responsible for suppressing illegal drug use and distribution by enforcing the Controlled Substances Act.

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[0003] Section 812 of the US Controlled Substances Act (21 U.S.C. §801 et seq.) (CSA) lists substances which were controlled in 1970 when the law was enacted. Since then, approximately 160 substances have been added, removed, or transferred from one schedule to another. The current official list of controlled substances can be found in section 1308 of the most recent issue of Title 21 Code of Federal Regulations (CFR) Part 1300 to end (21 CFR §1308) and the final rules which were published in the Federal Register subsequent to the issuance of the CFR. The Appendix attached to this patent application is a full listing of all of the federally Controlled Substances defined by the US DEA, as of September 2014.

[0004] This list describes the basic or parent chemical and do not describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may be controlled substances. These lists are intended as general references and are not comprehensive listings of all controlled substances. Please note that a substance need not be listed as a controlled substance to be treated as a Schedule I substance for criminal prosecution. A controlled substance analogue is a substance which is intended for human consumption and is structurally or pharmacologically substantially similar to or is represented as being similar to a Schedule I or Schedule II substance and is not an approved medication in the United States. (See 21 U.S.C. §802(32)(A) for the definition of a controlled substance analogue and 21 U.S.C. §813 for the schedule).

[0005] Drugs, substances, and certain chemicals used to make drugs are classified into five (5) distinct categories or schedules depending upon the drug's acceptable medical use and the drug's abuse or dependency potential. The abuse rate is a determinate factor in the scheduling of the drug; for example, Schedule I drugs are

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considered the most dangerous class of drugs with a high potential for abuse and potentially severe psychological and/or physical dependence. As the drug schedule changes-- Schedule II, Schedule III, etc., so does the abuse potential-- Schedule V drugs represents the least potential for abuse. A Listing of drugs and their schedule are located at Controlled Substance Act (CSA) Scheduling or CSA Scheduling by Alphabetical Order. These lists describe the basic or parent chemical and do not necessarily describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may also be classified as controlled substances. These lists are intended as general references and are not comprehensive listings of all controlled substances.

[0006] Note that a substance need not be listed as a controlled substance to be treated as a Schedule I substance for criminal prosecution. A controlled substance analogue is a substance which is intended for human consumption and is structurally or pharmacologically substantially similar to or is represented as being similar to a Schedule I or Schedule II substance and is not an approved medication in the United States. (See 21 U.S.C. §802(32)(A) for the definition of a controlled substance analogue and 21 U.S.C. §813 for the schedule).

Schedule I

[0007] Schedule I drugs, substances, or chemicals are defined as drugs with no currently accepted medical use and a high potential for abuse. Schedule I drugs are the most dangerous drugs of all the drug schedules with potentially severe psychological or physical dependence. Some examples of Schedule I drugs are: heroin, lysergic acid diethylamide (LSD), marijuana (cannabis), 3,4-methylenedioxymethamphetamine (ecstasy), methaqualone, and peyote.

Schedule II

[0008] Schedule II drugs, substances, or chemicals are defined as drugs with a high potential for abuse, less abuse potential than Schedule I drugs, with use potentially leading to severe psychological or physical dependence. These drugs are also considered dangerous. Some examples of Schedule II drugs are: cocaine, methamphetamine, methadone, hydromorphone (Dilaudid), meperidine (Demerol), oxycodone (OxyContin), fentanyl, Dexedrine, Adderall, and Ritalin.

Schedule III

[0009] Schedule III drugs, substances, or chemicals are defined as drugs with a moderate to low potential for physical and psychological dependence. Schedule III drugs abuse potential is less than Schedule I and Schedule II drugs but more than Schedule IV. Some examples of Schedule III drugs are: Combination products with less than 15 milligrams of hydrocodone per dosage unit (Vicodin), Products containing less than 90 milligrams of codeine per dosage unit (Tylenol with codeine), ketamine, anabolic steroids, and testosterone.

Schedule IV

[0010] Schedule IV drugs, substances, or chemicals are defined as drugs with a low potential for abuse and low risk of dependence. Some examples of Schedule IV drugs are: Xanax, Soma, Darvon, Darvocet, Valium, Ativan, Talwin, and Ambien.

Schedule V

[0011] Schedule V drugs, substances, or chemicals are defined as drugs with lower potential for abuse than Schedule IV and consist of preparations containing limited quantities of certain narcotics. Schedule V drugs are generally used for antidiarrheal, antitussive, and analgesic purposes. Some examples of Schedule V drugs are:

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cough preparations with less than 200 milligrams of codeine or per 100 milliliters (Robitussin AC), Lomotil, Motofen, Lyrica, and Parepectolin.

[0012] The transport and sales of federally controlled substances, hereinafter simply referred to as “controlled substances,” has generally in the past been handled through pharmaceutical suppliers but with several states looking at the legalized sales of products like Marijuana there is a great need to identify, control, track and document these sales.

[0013] Containers carrying controlled substances should be readily identifiable both by sight and odor. Dogs are often used to locate these items, but if they are sealed where the air and moisture in the container is replaced with an inert gas along with a dehumidifying agents before sealing, dogs might not be able to locate these items. Identifying odor materials can be attached directly to the outside of the container or to the label. There are other various ways to identify these containers like colorization of the containers and their labels, bar coding and microchips either on the inside or affixed to the outside.

[0014] Problems will definitely arise from the transport of these materials from a state that legalizes it to a state where its possession is still illegal. Clearly identifying these containers will help to alleviate some of these problems. If states that legalize the sales of controlled substances like Marijuana would stipulate that it is only to be sold in an identifiable sealed container, there could be a greater control of its propagation, sales and the state taxes paid. With the legalization and controlled sales, the price

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would come down so that it would not be profitable for the illegal growing of the products.

[0015] Numerous innovations for pharmaceutical products have been provided in the prior art that are described as follows. Even though these innovations may be suitable for the specific individual purposes to which they address, they differ from the present design as hereinafter contrasted. The following is a summary of those prior art patents most relevant to this application at hand; as well as a description outlining the difference between the features of the canning process of controlled substances and the prior art.

[0016] Patent No. 5,135,144 of David C. Blakley describes a belt worn and readily portable medical supply pouch for holding a supply of drug containers in a temperature stable and contamination resistant environment is disclosed. A substantially rectangular housing fabricated from a thick insulating material comprising a bottom, two side panels, a front and a back panel with an open top. A housing thus formed defines a cavity therein for storing a supply of drug cartridges. A protective panel extending across the opening of the housing and angled downward into the cavity is provided to prevent contamination from entering the cavity, while providing access by the hand of a user through the opening and down into the cavity for retrieving one of the drug containers. The housing is covered inside and out by a water-proof and contamination-resistant nylon material. Two belt loop members are affixed to the back panel of the housing for attaching the pouch to the waist belt of a user. An internal pocket inside the cavity of the housing is provided for containing a heating element for heating the interior cavity. An outside auxiliary pocket is attached

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to the outside surface of the front panel for storing items not requiring an insulated and contamination free environment.

[0017] This patent describes a belt worn and readily portable medical supply pouch for holding a supply of drug containers. It does not describe a single sealed container for a controlled substance like Marijuana.

[0018] Patent No. 5,836,474 Georan Wessberg tells of an invention that relates to a medicament storage device which includes a storage plate having a plurality of storage spaces for storing quantities, such as medicament dosages and a base unit which has a memory and an alarm function. The device is characterized in that the openings of respective storage spaces are provided with a closure means in the form of a long and a short flap which overlap one another and which are either spring mounted or consist of elastic material. The flap overlap regions include indicating means which illustrate in which direction passage has occurred through the opening and/or with detecting means which produce a signal relating to the direction of the last passage through the opening.

[0019] This patent tells of an invention that relates to a medicament storage device which includes a storage plate having a plurality of storage spaces for storing quantities, such as medicament dosages. It again does not describe a single sealed container for a controlled substance like Marijuana.

[0020] Patent No. 5,866,219 of Paul McClure et al. relates to a product information label system having a base member and a foldout medical information pamphlet

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which is applied to medicinal and drug containers where the foldout pamphlet is resealable for subsequent use.

[0021] This patent relates to a product information label system and does not deal with any form of containment means.

[0022] Patent No. 6,793,081 Jay S. Derman describes a locking neck ring device that is placed over a capped bottle or container and grips the bottle neck ring, and together with a padlock or other securing means, prevents access to the bottle cap. The locking device comprises a clamp member that jackets a capped bottle neck; a cover which fits over the clamp member causing it to clamp on to the neck below the neck ring, and means to hold the clamp member to the cover. Provision is made for attaching a padlock or other securing means which holds the locking ring device in place. The bottle or container cap can then not be accessed for removal. The device is applicable to all sizes of drug containers, wine and liquor bottles for effectively locking access to the container contents.

[0023] This patent describes a locking neck ring device that is placed over a capped bottle or container and grips the bottle neck ring. It does not describe a single sealed container for a controlled substance like Marijuana with any specific containment means.

[0024] None of these previous efforts, however, provide any of the benefits attendant with the process of canning a controlled substance and do not mention the use of an inert gas as a means of providing long-term storage. The present process of canning a

controlled substance achieves its intended purposes, objects and advantages over the prior art through a new, useful and unobvious combination of method steps and component elements at a reasonable cost and by employing readily available materials.

[0025] In this respect, before explaining at least one embodiment of the canning a controlled substance in detail it is to be understood that the process is not limited to just a specific process set forth in the following description or illustrated in the drawings. The canning process of controlled substances is capable of having other embodiments and of being applied in various ways. In addition, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting. As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for creating other processes for carrying out the several purposes of the present application. It is important, therefore, that the claims be regarded as including such equivalent construction insofar as they do not depart from the spirit and scope of the present application.

SUMMARY OF THE INVENTION

[0026] The principal advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is to control the identification, movement and tracking of the federally controlled substance products.

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[0027] Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is to control the propagation and processing of the federally controlled substance products.

[0028] Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is to control the sale and collection of sales taxes from the sale of the federally controlled substance products.

[0029] Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is the option of the removal of the oxygen and moisture while keeping the substance stored in an inert gaseous atmosphere.

[0030] Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that with an external odor substance, dogs will be able to locate it.

[0031] Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that they can have a micro-chip on the inside or outside for product locating.

[0032] Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that they can have a bar code on the outside for product identification.

[0033] Another advantage in the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that a variety of different packing and dehumidifying materials can be used, including formed rice cakes.

[0034] Another advantage is when formed rice cakes are used in the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance as a packing and dehumidifying agent, they can be readily and easily disposed of and are recyclable eco-friendly materials.

[0035] Another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is that an inexpensive form container can be made in different sizes and shapes, including cans, plastic pails, etc.

[0036] Yet another advantage of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is it can use a variety of different inert gases in the manufacturing process if desired, including nitrogen, etc.

[0037] These together with other advantages in the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance, along with the various features of novelty, which characterize the process, are pointed out with particularity in the claims annexed to and forming a

part of this disclosure. For a better understanding of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance and its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred and alternate embodiments of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance. There has thus been outlined, rather broadly, the more important features of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance that will be described hereinafter and which will form the subject matter of the claims appended hereto.

[0038] The preferred embodiment of container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance will be placing the controlled substance into the preformed metal container with an enameled surface on the inside and outside. The process will begin by inserting a packing and dehumidifying agent, preferably a formed rice cake. If a microchip is desired within the container it is put in before inserting the controlled substance. The controlled substance is then inserted with a second preformed rice cake on the top. In some cases the rice cakes will be eliminated or just a single rice cake will be used on

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the top or the bottom. All of the different configurations of containing the controlled substance with rice cakes will be covered within the scope of this application.

[0039] If the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance in an inert atmosphere is desired the container is placed into a vacuum chamber. The chamber doors are closed and a vacuum of approximately 26 - 29 inches of mercury is drawn on the chamber. This removes all of the atmosphere/oxygen and atmospheric moisture that may be present. The vacuum is then halted and the chamber is then flooded with gaseous nitrogen. The gas is inert and dry, creating a benign atmosphere inside the container and around the controlled substance. This dry, inert environment now created inside the container will halt the degradation of the controlled substance. The shelf life/storage time created by this process should give the controlled substance stored inside the container almost an unlimited life regardless of the environment outside the container. This application is not limited to gaseous nitrogen. Alternate methods can include liquid nitrogen, oxygen absorbers along with other inert gases such as carbon dioxide, helium, and argon. Any process used to create an inert/benign atmosphere while canning the controlled substances will be covered within the scope of this application.

[0040] After the evacuation/flooding process is complete the chamber doors are opened and the container, filled with nitrogen, is pushed out and immediately put through the conventional canning process. The nitrogen gas that is in the container at this time is very heavy, dense, and cold and is not naturally trying to diffuse into the air in the room allowing for a reasonable amount of time to apply a lid and seal the

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container. An alternate method of packaging would be to put the prepackaged controlled substance in a sealable plastic bag filled with nitrogen and place it within the container.

[0041] After the container has been sealed in the conventional pop-top canning procedure, an identifying scent substance is permanently adhered to the can or label. If an external microchip is desired it can be adhered to the outside of the can or be incorporated into a plastic removable locking ring around the top of the can. The label can also have an identifying bar code imprinted on it or the bar code can be printed on the can.

[0042] An alternate embodiment of the of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance would be the use of a polymer round pail type of container having a lid that screws on with a ratcheting locking mechanism and an O-ring seal. Once the polymer round pail has been filled, a cushioning and dehumidifying element such as a formed rice cake is placed on top of the substance. If the process of storing the controlled substance in an inert atmosphere is desired it is then placed into a vacuum chamber. The chamber doors are closed and a vacuum of approximately 26 - 29 inches of mercury is drawn on the chamber removing all of the atmosphere/oxygen and atmospheric moisture that may be present. The vacuum is then halted and the chamber is then flooded with gaseous nitrogen. The gas is inert and dry, creating a benign atmosphere inside the container and around the product. This dry, inert environment now created inside the container will halt degradation of the controlled substance. This application is not limited to gaseous nitrogen. Alternate methods can include liquid nitrogen, oxygen

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absorbers along with other inert gases such as carbon dioxide, helium, and argon. Any process used to create an inert/benign atmosphere inside the container will be covered within the scope of this application. Additional sealing will include a foil membrane attached over the top edge of the container with an O-ring in the lid making the final sealing means.

[0043] Additionally, a stand-alone container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is disclosed herein for the storage and preservation of marijuana “trim” while it is collected and before it is processed to extract the active compound Tetrahydrocannabinols or THC. When Marijuana is propagated the plants are often trimmed resulting in cuttings (scraps) of Marijuana plants known as “trim.” In this embodiment, a container is used having an open able/closeable lid and the container is in communication with a vacuum pump and a nitrogen (or other inert gas) compressed tank storage. The “trim” is collected each day then stored in the specialized container under a vacuum and/or after being flooded with inert gas. This keeps the trim fresh over the relatively long collection times before processing the trim to extract the THC therein.

[0044] Furthermore, in the process of canning the controlled substances for maximized preservation the oxygen is removed from the container during the process in one of four ways: (1) injection into the container of inert gas before sealing the container; (2) flooding the container with inert gas before sealing the container; (3) passing the container under a free flowing stream of inert gas before sealing the

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container; and (4) addition of an oxygen absorber packet into the container before sealing the container.

[0045] With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of this application, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art. All equivalent relationships to those illustrated in the drawings and described in the specification intend to be encompassed by the present disclosure. Therefore, the foregoing is considered as illustrative only of the principles of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the design to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of this application.

BRIEF DESCRIPTION OF THE DRAWINGS

[0046] The accompanying drawings, which are incorporated in and form a part of this specification, illustrate embodiments of the process of canning a controlled substance and together with the description, serve to explain the principles of this application.

[0047] FIG. 1 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating a microchip on the preformed rice

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cake on the bottom of the can with the controlled substance between a second preformed rice cake with the plastic lid raised above.

[0048] FIG. 2 depicts a perspective view of a preformed rice cake.

[0049] FIG. 3 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the container completely filled with the controlled substance with the plastic lid raised above.

[0050] FIG. 4 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the controlled substance on the bottom of the container with a preformed rice cake on top with a barcode on the label and the plastic lid raised above.

[0051] FIG. 5 depicts a perspective view of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container cut away illustrating the controlled substance on the bottom of the container with a preformed rice cake on top and the plastic lid raised above.

[0052] FIG. 6 depicts a perspective view of a tamper-resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container with the controlled substance in a sealed plastic bag.

[0053] FIG. 7 depicts a perspective view of a tamper-resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container with the plastic removable locking ring incorporating a microchip.

[0054] FIG. 8 depicts a cross section of a tamper-resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container with a crimped edge on the bottom as well as the top. It should be understood that a conventional three-part tin (metal) can could be used, with or without a pop-top feature. This means that if a conventional three-part can is used without a tamper-resistant easy open “pop-top” feature, then it would necessitate a can opener be used to open the can to make the contents accessible.

[0055] FIG. 9 depicts a perspective view of an alternate embodiment using a polymer round pail type of container having a lid that screws on with a ratcheting locking mechanism broken away illustrating the internal components.

[0056] FIG. 10 illustrates a stand-alone specialized container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is disclosed herein for the storage and preservation of marijuana “trim” while it is collected and before it is processed to extract the active compound Tetrahydrocannabinols or THC.

[0057] FIG. 11 depicts a single tamper resistant easy open container representing one of the containers removed from a shrink-wrapped four pack, wherein said four pack of tamper resistant easy open containers is shown in FIG. 12.

[0058] FIG. 12 depicts a four pack of single tamper resistant easy open containers meant for the storage, preservation, identification, tracking and transport of a federally controlled substance in small quantities, all being shrink-wrapped into one pack of four containers.

[0059] FIG. 13 illustrates a flow chart of the first three steps in the process for the storage, preservation, identification, tracking and transport of a federally controlled substance.

[0060] FIG. 14 illustrates a flow chart of the last two steps in the process for the storage, preservation, identification, tracking and transport of a federally controlled substance.

[0061] For a fuller understanding of the nature and advantages of the container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance, reference should be had to the following detailed description taken in conjunction with the accompanying drawings which are incorporated in and form a part of this specification, illustrate embodiments of the process together with the description, serve to explain the principles of this application.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0062] Referring now to the drawings, wherein similar parts of the process of canning a controlled substance is illustrated there is seen in **FIG. 1** a perspective view of a conventional pop-top can assembly **10A** cut away illustrating the internal microchip **12A** on the lower preformed rice cake **14** at the bottom of the container **16A**. The controlled substance **18** is between the upper preformed rice cake **20** and lower preformed rice cake **14** with the plastic lid **22** above the container **16A**. The container **16A** will consist of a conventional pressed formed metal can without a crimped edge on the container bottom edge **24**. The container **16A** will have a label **26** where an external odor substance **28A** can be located, or the external odor substance **28B** can be adhered to the outside surface of the container **16A**. The process of storing the controlled substance in an inert atmosphere is optional at this time. A tamper resistant easy open lid **30**, possibly configured in any of numerous configurations, here shown as a pop-top lid with an opening tab **32**, which will be sealed to the container top edge **34** of container **16A**. The entire container and lid may be coated with a plastic, latex, enamel or enamel-like lining. This liner will shield against the product coming in contact with the bare metal of the can, and possibly reacting with the metal, and will act to preserve the contents without use of an inner sealed bag or the like.

[0063] **FIG. 2** depicts a perspective view of a preformed rice cake **14, 20**.

[0064] **FIG. 3** depicts a perspective view of a tamper resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container **10B** cut away illustrating the container completely filled with the controlled substance **18** with the plastic lid **22** above container **16A**.

[0065] FIG. 4 depicts a perspective view of a tamper resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container 10C cut away illustrating the controlled substance 18 on the bottom of the container 16A with the upper preformed rice cake 20 with a barcode 40 on the label 26 and the plastic lid 22 above the container 16A.

[0066] FIG. 5 depicts a perspective view of a tamper resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container 10D cut away illustrating the controlled substance 18 on the bottom of the container 16A with the upper preformed rice cake 20 on top and the plastic lid 22 above the container 16A.

[0067] FIG. 6 depicts a perspective view of a tamper resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container 10E with the controlled substance 18 in a sealed plastic bag 42.

[0068] FIG. 7 depicts a perspective view of a tamper resistant easy open sealed container configured to contain a controlled substance and enable identification of the internal contents of such container 10F with the plastic removable locking ring 44 over the plastic lid 22 and the top edge 34 of the container 16A incorporating the external microchip 12B.

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[0069] **FIG. 8** depicts a cross section of a three part tamper resistant easy open container configured to contain a controlled substance and enable identification of the internal contents of such container **10G** with a crimped edge **46** on the container bottom edge **48** as well as the container top edge **34**.

[0070] **FIG. 9** depicts a perspective view of an alternate embodiment **10H** of the process of canning a controlled substance in bulk amounts using a polymer round pail type of container **16B** having a lid **56** that screws on with a ratcheting locking mechanism **58**. The polymer round pail **16B** has been broken away illustrating the controlled substance **18** and the rice cake packing material **60**. The process of storing the controlled substance in an inert atmosphere is optional at this time. A film seal **62** covers the top surface attached to the pail edge **64**. The polymer round pail **16B** has a pivoting handle **66**. This polymer round pail container **16B** would be used for bulk controlled substance storage and transport.

[0071] **FIG. 10** illustrates a stand-alone specialized container and process for the storage, preservation, identification, tracking and transport of a federally controlled substance is disclosed herein for the storage and preservation of Marijuana “trim” while it is collected and before it is processed to extract the active compound Tetrahydrocannabinols or THC. This stand-alone Marijuana trim storage system **70** includes a main holding container vessel **72** within which the Marijuana trim **74** is placed for storage until processed. The main container vessel **72** is equipped with a lid **76** which mates with the lid accepting portion **78** of the main container **72** and a gasket **80** to enable secure sealing of the lid **76** to the main container vessel **72**. The main container vessel **72** is in communication with an inert gas source **82**, here a

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compressed inert gas cylinder 84. The inert gas cylinder 84 is equipped with a regulator 86 including two pressure gauges 88 and 90. When the inert gas exits the regulator it is controlled by an on/off valve 92 located between the compressed gas cylinder 84 and the main container vessel 72.

[0072] Furthermore, the main container vessel 72 is in communication with a vacuum pump 94 and there is an on/off valve 96 in between the main container vessel 72 and the vacuum pump. Another on/off valve 98 is located before the vacuum pump 94 and the inert gas source 82 can communicate with the lid 76 of the main container. The lid also includes a pressure relief valve 100 and a vacuum gauge 102. The stand-alone Marijuana trim storage system 70 main container vessel 72 can be placed in a refrigeration unit or the main container vessel 72 can be equipped with refrigeration coils (not shown).

[0073] The storage and preservation of Marijuana trim is accomplished through this stand-alone Marijuana trim storage system 70. During the growing and harvesting of marijuana, the plant is "pruned" in the effort to enhance the "bud", the most desirable part of the plant. This pruning generates what is referred to as "Trim." When enough trim has been accumulated, it is then washed with solvents to liberate the THC that is in the leaves, the solvents are removed and liquid THC remains. This liquid is used in the baking of edible products (i.e. cookies, brownies, small cakes, etc.). The problem the industry has to combat is keeping the trim fresh until enough has been accumulated to make processing viable. The present stand-alone Marijuana trim storage system 70 for trim storage that consists of an airtight main container vessel 72 that can be opened easily, filled with trim, and then a vacuum is applied (26-28 inches

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of mercury) to boil off atmospheric moisture and remove the oxygen. After evacuation, the main container vessel **72** is then filled with dry, inert gas, preferably nitrogen. This process stabilizes and preserves the trim for processing. In addition, this vessel can be refrigerated to 36 - 40 degrees Fahrenheit to further slow degradation of the contents.

[0074] **FIG. 11** depicts a single tamper resistant easy open container **112** representing one of the containers removed from a four pack, wherein said four pack of tamper resistant easy open containers is shown in **FIG. 12**. The single tamper resistant easy open container **112** has been filled with a federally controlled substance **114**, and includes a tamper resistant easy open lid **116** (in this case showing a pop-top ring **118** for easy opening). A plastic removable lid **120** is also provided to replace the tamper resistant easy open lid **116** after it is removed to keep the contents fresh. The tamper resistant lid **116** including the pull top **118** lid is a tamper resistant safety feature. If the seal is breached, it can't be returned to its sealed condition giving the consumer a tell-tale indication that the product has possibly been tampered with or compromised. Child proof lids can be opened and returned to a sealed condition, not leaving a tell-tale sign, thus pilferage and possible compromised product will go undetected. A pull top lid is a one-time use only feature.

[0075] **FIG. 12** depicts a four pack of single tamper resistant easy open containers **130** meant for the storage, preservation, identification, tracking and transport of a federally controlled substance in small quantities, all being shrink wrapped into one pack of four **130**. Each of the four cans **132**, **134**, **136** and **138** is held tightly and

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securely together by plastic shrink wrapping **140**. Each of the four cans **132**, **134**, **136** and **138** also includes a plastic lid **142**.

[0076] Small quantity usage is pervasive in federally controlled substances of all kinds. Because of the varying availability of packaging sizes, consumers are able to only open and expose small amounts of product at a time, thus eliminating the exposure of the product inside to the elements. This allows the consumer to keep and store their products for longer periods of time instead of utilizing them in a shorter period of time because of the shorter shelf life of exposed product. For example, with Marijuana: An eighth of an ounce of marijuana fits neatly into a nitrogen packed container, which is approximately the same size as a typical container of chewing tobacco. A plastic over cap is applied to the containers. Four of these containers are stacked and held together by a plastic shrink sleeve **140**. While the total amount of Marijuana in possession (in those US states which have legalized it) is currently $\frac{1}{2}$ ounce, only a $\frac{1}{8}^{\text{th}}$ ounce is exposed to the elements at any given time. The other $\frac{3}{8}^{\text{th}}$ ounce is sealed and stored tightly in the remaining containers, and stays as fresh as when it was first introduced into the containers for storage and preservation. All containers come with a pull top tamper resistant lid **116** (as shown in **FIG. 11**) affixed.

[0077] **FIG. 13** illustrates a flow chart of the first three steps in the process **150** for the storage, preservation, identification, tracking and transport of a federally controlled substance. Step **1** **152** includes the proper size container is selected to store the marijuana, a container that fits the portion to be processed. The container can be a metal/tin can with a vinyl or enamel coating inside. A coated container is preferred.

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This coating will shield the product from coming in contact with the bare metal of the can and possibly reacting with the metal. The outside of the container could be coated with either a vinyl or an epoxy to prevent rust.

[0078] A plastic lined can is preferred, to include but not limited to a plastic lining or coating on the inside of the can to protect the product from coming in contact with bare metal/tin and causing a reaction, for example, transfer of a metallic taste to the product and/or having moist product coming in direct contact with any metal material.

[0079] Step 2 154 includes a plastic lining or insert can be installed, this coating or lining will shield against the product coming in contact with the bare metal of the can, and possibly reacting with the metal. Containers can also be made of composite material, (a composite can), a plastic can, a plastic pail or a plastic bucket.

[0080] Step 3 156 includes the product, (in this example, marijuana), is then weighed and placed in the can, or weighed in the can, (minus the tare weight of the can).

[0081] FIG. 14 illustrates a flow chart of the last two steps in the process 150 for the storage, preservation, identification, tracking and transport of a federally controlled substance. Here again, Step 3 156 includes the product, (marijuana), is then weighed and placed in the can, or weighed in the can, (minus the tare weight of the can).

Following Step 3 156, Step 4 158 includes the can or container is now run through a process to remove the oxygen from the container. This is accomplished through the use of inert gases, to include but not limited to the insertion of liquid or gaseous inert gases, i.e. nitrogen, carbon dioxide, helium, etc., to create a benign, dry, non-reactive atmosphere inside the can to stabilize and preserve the product.

[0082] This is achieved in one of four alternative method steps as described below:

[0083] Method Step 4A 160 includes removing the oxygen by having the can/container pass under a system that injects inert liquid gas (nitrogen preferred). The liquid is cold and dense. It immediately begins to gasify, thus displacing the atmospheric oxygen from the can/container. Before the gasification is complete, the can is sealed with a "pop top" lid and a seam is completed, leaving a nitrogen atmosphere inside the can/container.

[0084] This process can also be achieved by Step 4B 162 by placing the can, or cans, or containers, in a vacuum chamber, evacuating the chamber and then flooding the chamber with gaseous nitrogen or any inert gas, then quickly sealing (seaming) the cans before the colder dense gas warms and tries to escape.

[0085] A third method of replacing the oxygen is shown in Step 4C 164 which is to allow the filled cans to pass under a free falling, free flowing stream of nitrogen as it travels to the machine to be lidded and seamed. In lieu of injecting a measured quantity of liquid nitrogen in to the can as it moves toward the lidded/seamer, it is now replaced with just passing under a falling stream of cold, dense nitrogen. This achieves an oxygen removal displacement. This method is effective but allows much of the nitrogen to be wasted in the surrounding area.

[0086] A fourth method, as illustrated in Step 4D 166 would be to place an oxygen absorber packet inside the can prior to lidding. This will turn the available oxygen

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inside the can into iron oxide, thus effectively removing the oxygen in the can/container.

[0087] In summary, there are four basic configurations in which the federally controlled substances could be canned, (1) canned loosely alone with no spacer or insert; (2) canned with only a top spacer or insert; (3) canned with both a top and bottom spacer or insert, and (4) canned pre-packaged in a sealed plastic bag or foil envelope. Finally, bulk amounts of controlled substances could be stored and transported in large sealed polymer pails, with and without spacers or inserts.

[0088] Furthermore, in summary, in the process of canning the federally controlled substances for long term storage and maximized preservation, the oxygen is removed from the container during the process in one of four ways: (1) injection into the container of inert gas before sealing the container; (2) flooding the container with inert gas before sealing the container; (3) passing the container under a free flowing stream of inert gas before sealing the container; and (4) addition of an oxygen absorber packet into the container before sealing the container.

[0089] Moreover, it is anticipated that many other federally controlled substances such as pharmaceuticals will be stored, preserved, identified, tracked and transported using the present invention and inventive method. This is to include but not limited to using the same process for other drugs, pills, powders, and liquids to stabilize and preserve, giving them a longer shelf life. (Some medications degrade rapidly in the presence of atmospheric moisture, oxygen, and light.) This process is to include possible refrigeration of the cans to slow degradation of the products inside, in some

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cases even freezing the canned product. In the case of marijuana, low temperatures are desirable, but freezing will harm the product.

[0090] In addition, the present invention is directed at solving problems in scent detection and/or scent suppression for containers of federally controlled substances. Depending on the desired situation, when properly filled, no marijuana is allowed to come in contact with the outside of the container, and when properly sealed, the product cannot be detected by drug-sniffing dogs. If detection is desired, the container simply needs to come in contact with the marijuana on the outside of the container. The scent lingers and drug sniffing dogs can detect/locate the product. Alternatively, the previously described label having an odor adhered portion can be employed to enhance the detection of the federally controlled substance contents within the container so labeled.

[0091] Further, the purpose of the foregoing abstract is to enable the US Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

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CLAIMS

I claim:

Claim 1. A container for storage, preservation, identification, tracking and transport of a federally controlled substance comprising:

(a) a one or more piece airtight container having an outer portion having an exterior surface and an inner portion having an interior surface, an upper portion and a lower portion, configured for containing a federally controlled substance;

(b) an inner coating liner lining said interior surface of said airtight container;

(c) a one piece tamper resistant easy open lid affixed to said upper portion of said airtight container; and

(d) identifying indicia located on the outer portion exterior surface of said airtight container, for identifying the contained federally controlled substance contents within said container;

wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside.

Claim 2. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1,

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wherein said one or more piece airtight container includes a plastic coating lined metal container.

Claim 3. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said one or more piece airtight container includes a plastic lined composite container.

Claim 4. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said one piece tamper resistant easy open lid affixed to said airtight container includes a pop-top one piece tamper resistant easy open lid.

Claim 5. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said container comprises a polymer round pail and said one piece tamper resistant easy open lid affixed to said airtight container includes an airtight screw-on lid.

Claim 6. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said identifying indicia located on said outer portion exterior surface for identifying the contained federally controlled substance contents within said container includes a label having a portion where an external odor from a federally controlled substance is adhered, for the purpose of allowing drug-

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sniffing dogs to detect the presence of the federally controlled substance contents contained therein.

Claim 7. The container for storage, preservation, identification, tracking and transport of a federally controlled substance according to claim 1, wherein said identifying indicia is located within said inner portion of said airtight container and comprises a microchip.

Claim 8. A method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, comprising the steps of:

(a) a one or more piece airtight container having an outer portion having an exterior surface and an inner portion having an interior surface, an upper portion and a lower portion, configured for containing a federally controlled substance;

(b) providing an inner coating liner lining said interior surface of said airtight container;

(c) providing a one piece tamper resistant easy open lid affixed to said upper portion of said airtight container; and

(d) identifying indicia located on the outer portion exterior surface of said airtight container, for identifying the contained federally controlled substance contents within said container;

wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside.

Claim 9. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said one or more piece airtight container includes a plastic coating lined metal container.

Claim 10. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said one or more piece airtight container includes a plastic lined composite material container.

Claim 11. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said one piece tamper resistant easy open lid affixed to said airtight container includes a pop-top one piece tamper resistant easy open lid.

Claim 12. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said container comprises a polymer round pail and said one piece tamper resistant easy open lid affixed to said airtight container includes an airtight screw-on lid.

Claim 13. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said identifying indicia located on the outer portion exterior surface for identifying the contained federally controlled substance contents within said container includes a label having a portion where an external odor from a federally controlled substance is adhered, for the purpose of allowing drug-sniffing dogs to detect the presence of the federally controlled substance contents therein.

Claim 14. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said identifying indicia is located within said inner portion of said airtight container and comprises a microchip.

Claim 15. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said airtight container configured for

containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside, includes removing the oxygen from said airtight container by injection of inert gas prior to sealing said airtight container.

Claim 16. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside, includes removing the oxygen from said airtight container by flooding said airtight container with inert gas prior to sealing said airtight container.

Claim 17. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside, includes removing the oxygen from said airtight containers by having said containers pass under a free flowing stream of inert gas prior to sealing said airtight container.

Claim 18. The method for making a container for the storage, preservation, identification, tracking and transport of a federally controlled substance, according to claim 8, wherein said airtight container configured for containing a federally controlled substance, has the atmosphere evacuated and the container filled with an inert gas before the airtight container is hermetically sealed, containing a federally controlled substance inside, includes removing the oxygen from said airtight container by inclusion of an oxygen absorber packet prior to sealing said airtight container.

Claim 19. A system for storage and preservation of a federally controlled substance, comprising:

(a) a main container vessel for accepting a federally controlled substance, having a lid accepting portion, including a vessel lid which mates with said vessel lid to enable secure sealing of said lid to said main container vessel;

(b) an inert gas source in communication with an said main container vessel;
and

(c) a vacuum pump in communication with said main container vessel;

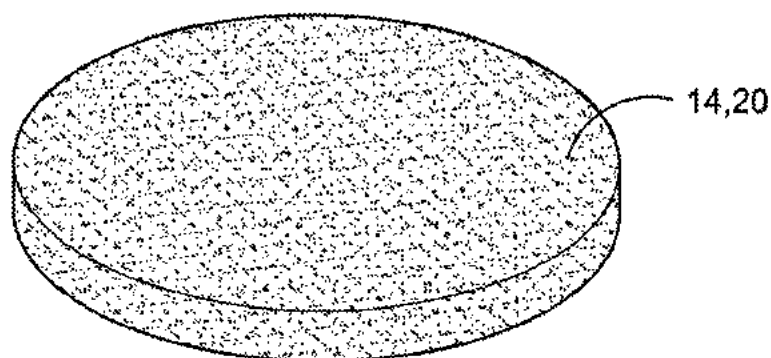
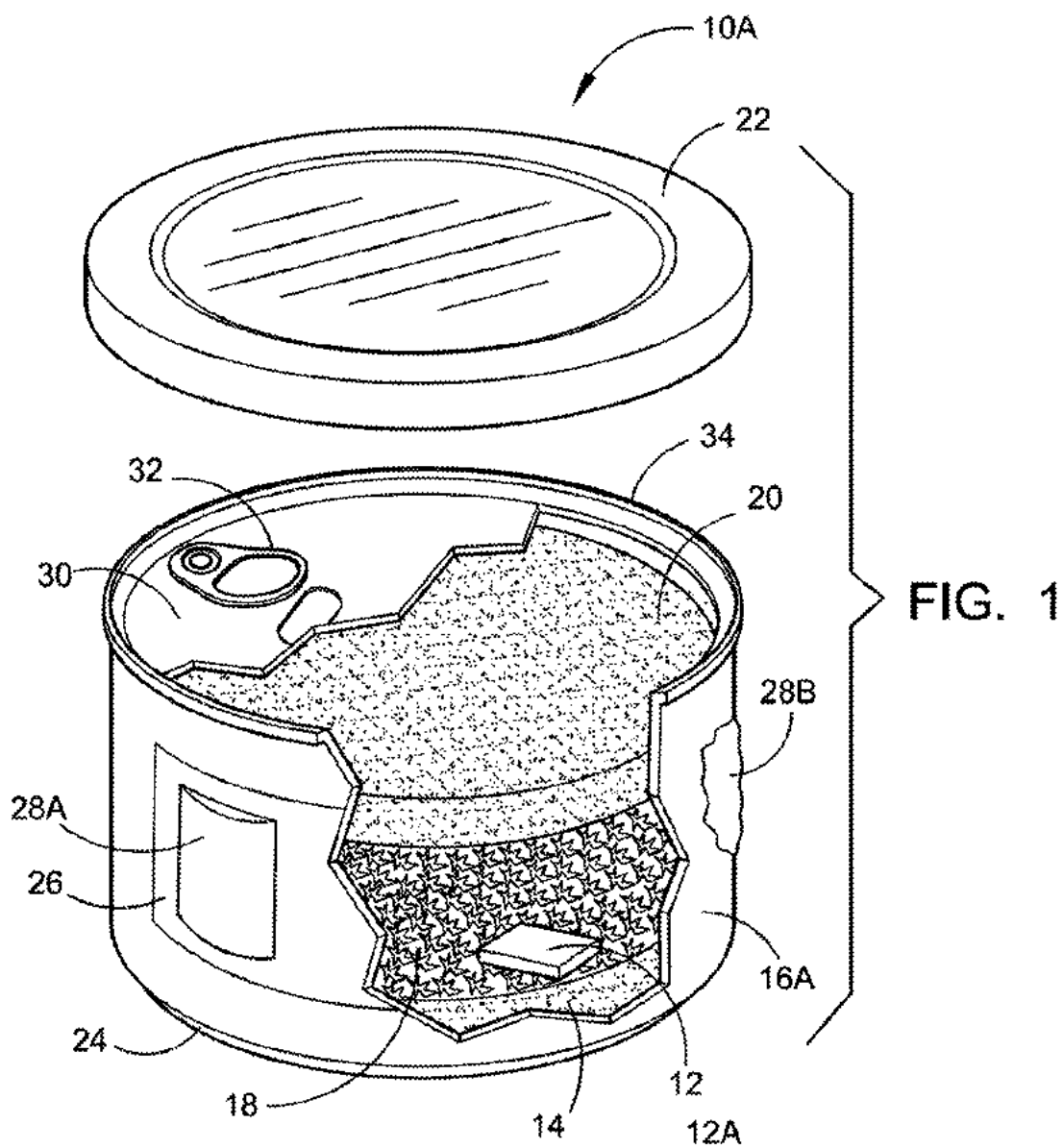
wherein said lid is open able and closable and the vessel accepts a federally controlled substance within it to store and preserve said federally controlled substance.

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Claim 20. The system for storage and preservation of a federally controlled substance, according to claim 19, wherein said main container vessel can be placed in a refrigeration unit or the main container vessel can be equipped with refrigeration coils to keep the contents of said main container vessel cool during storage for preservation.

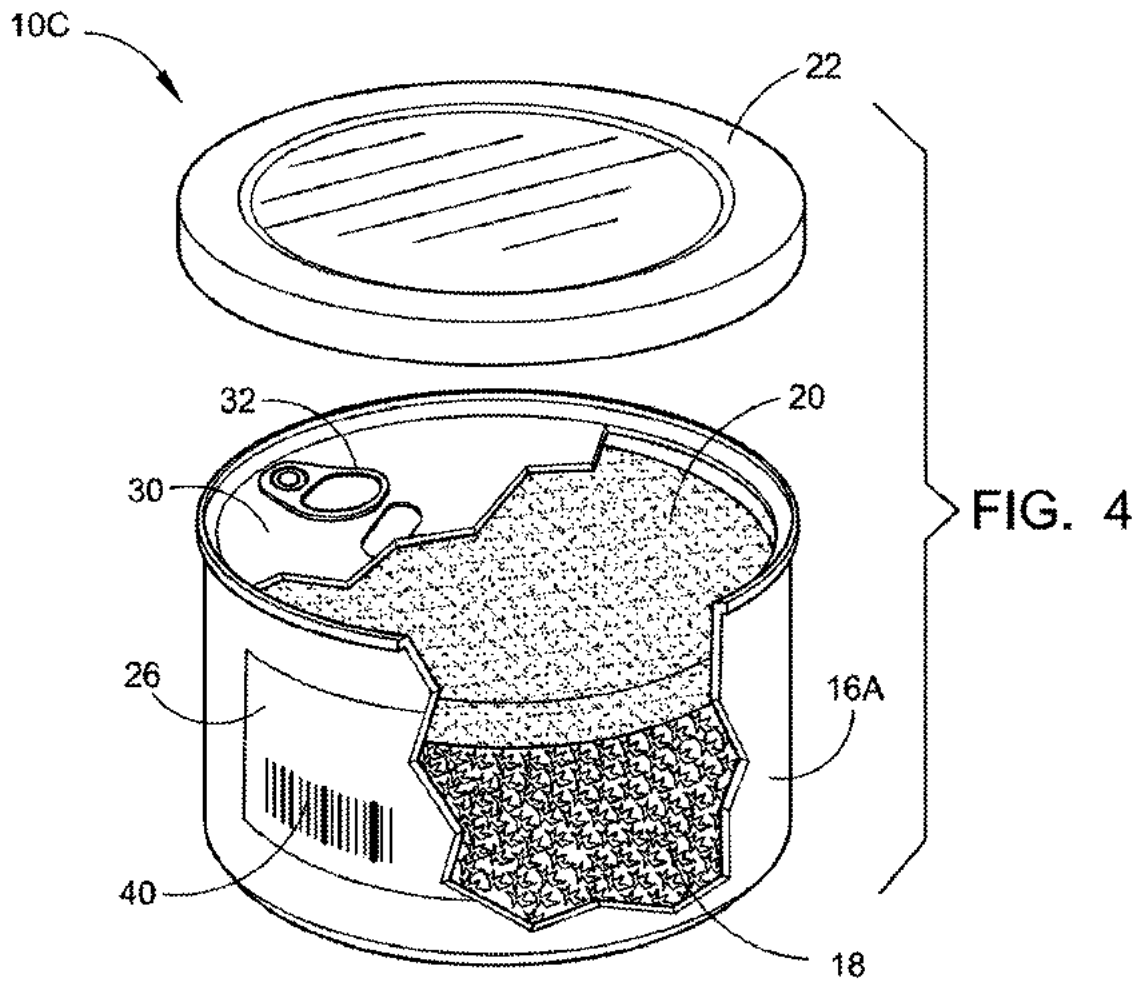
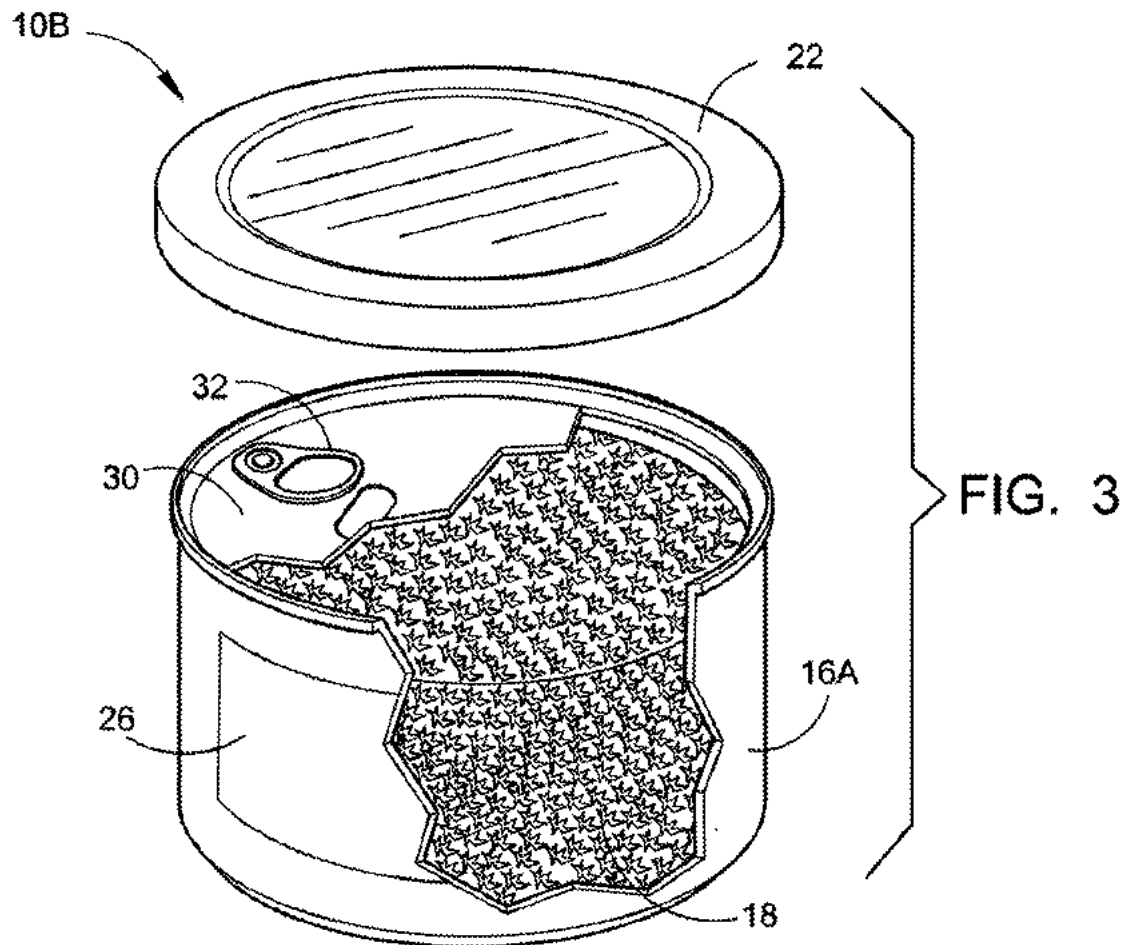
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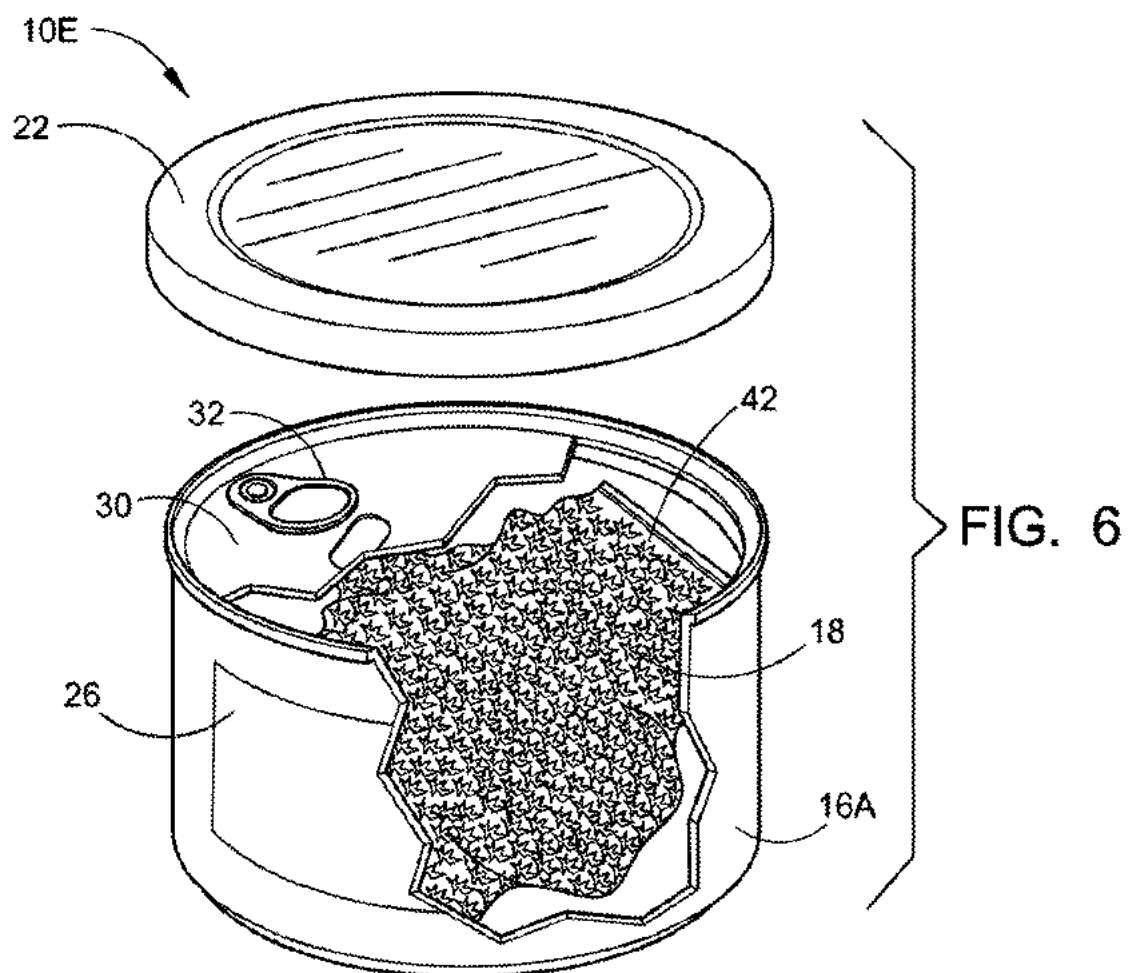
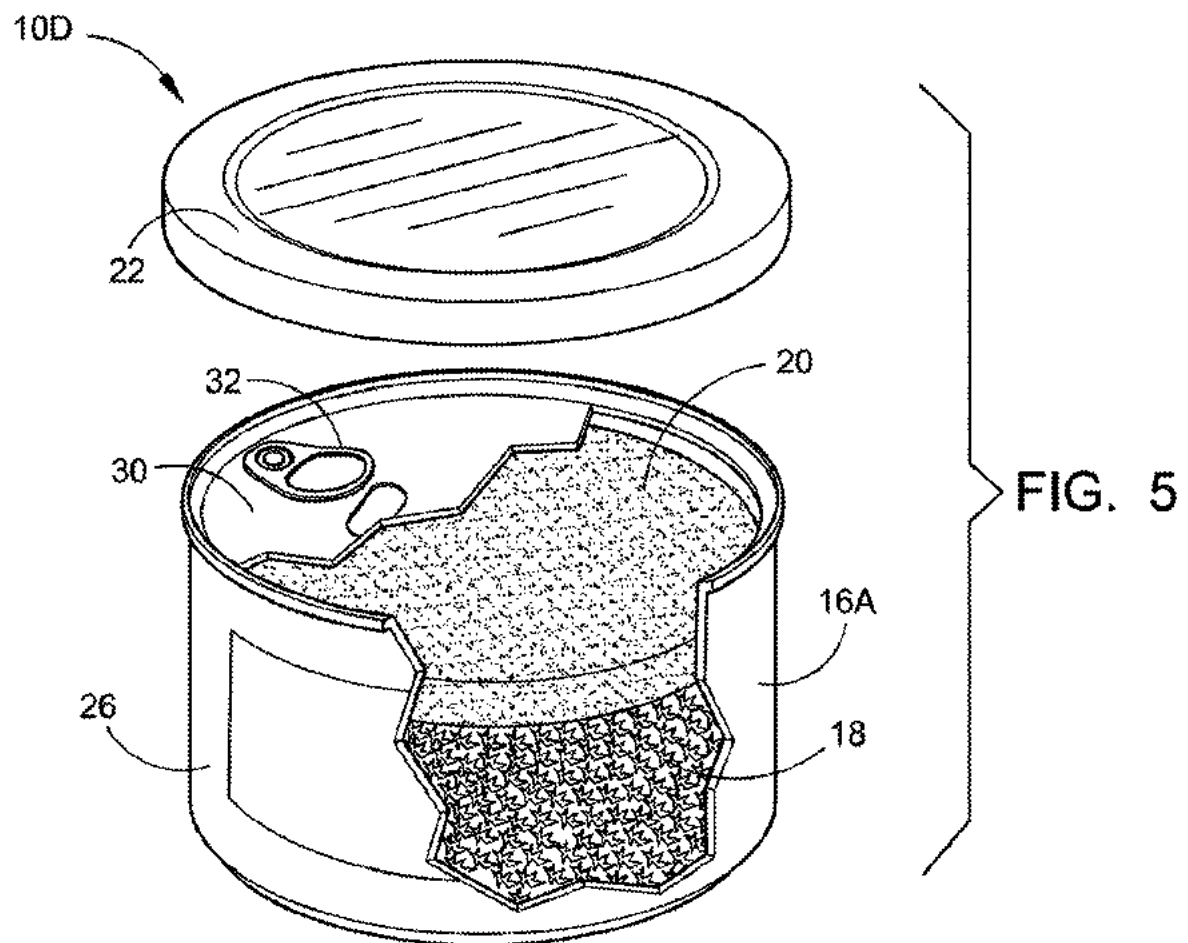
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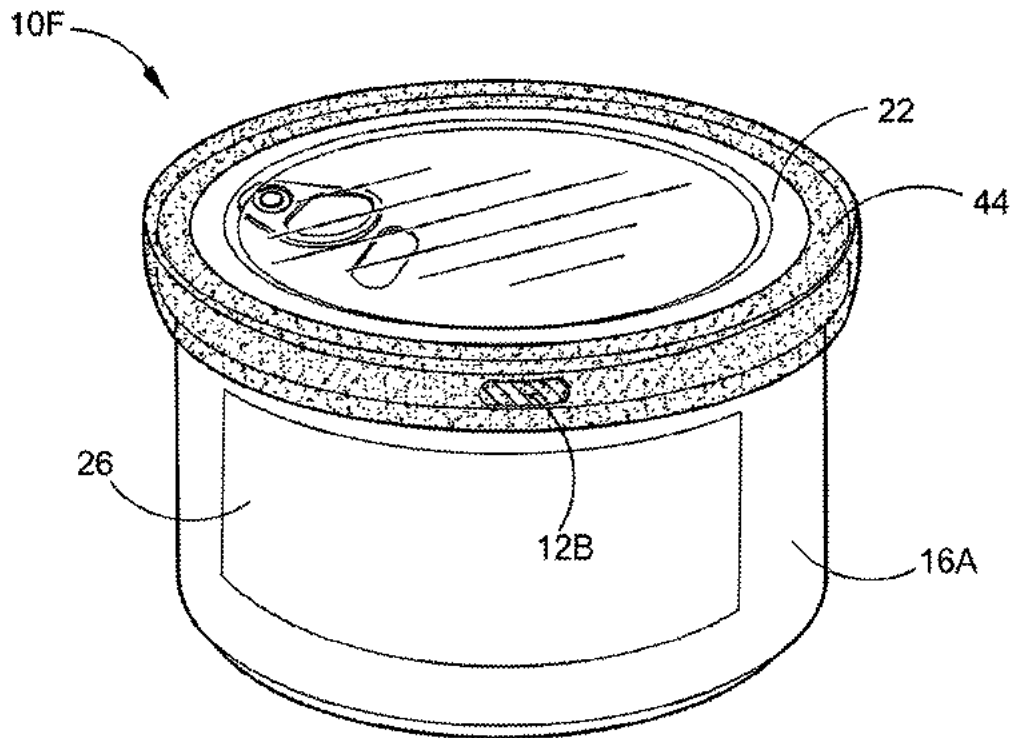


FIG. 7

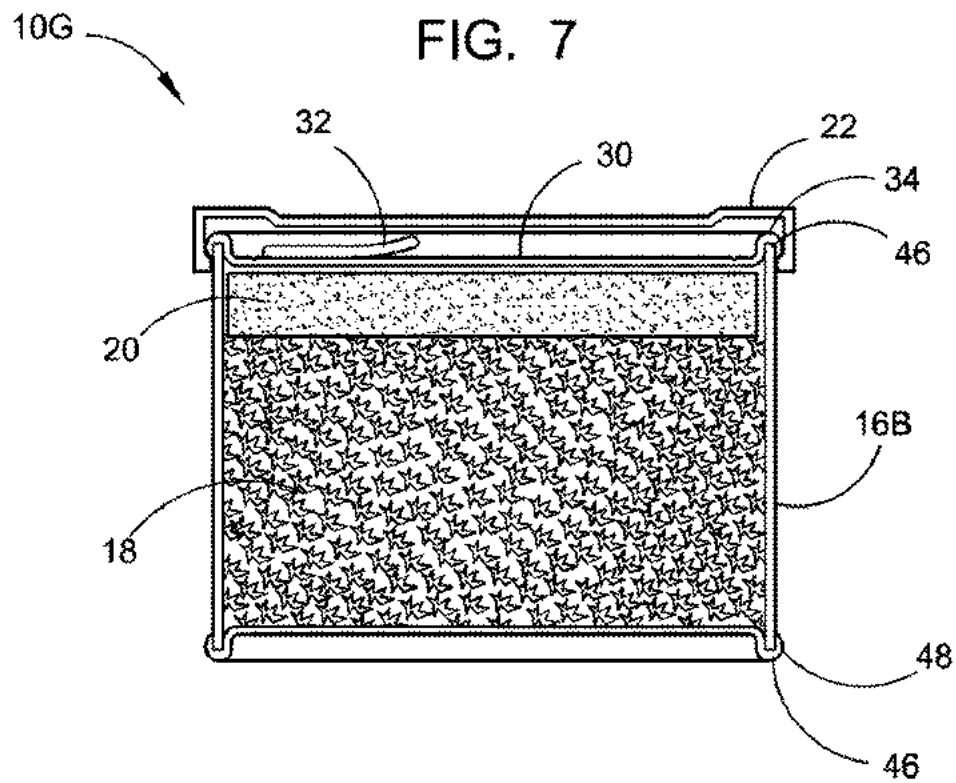
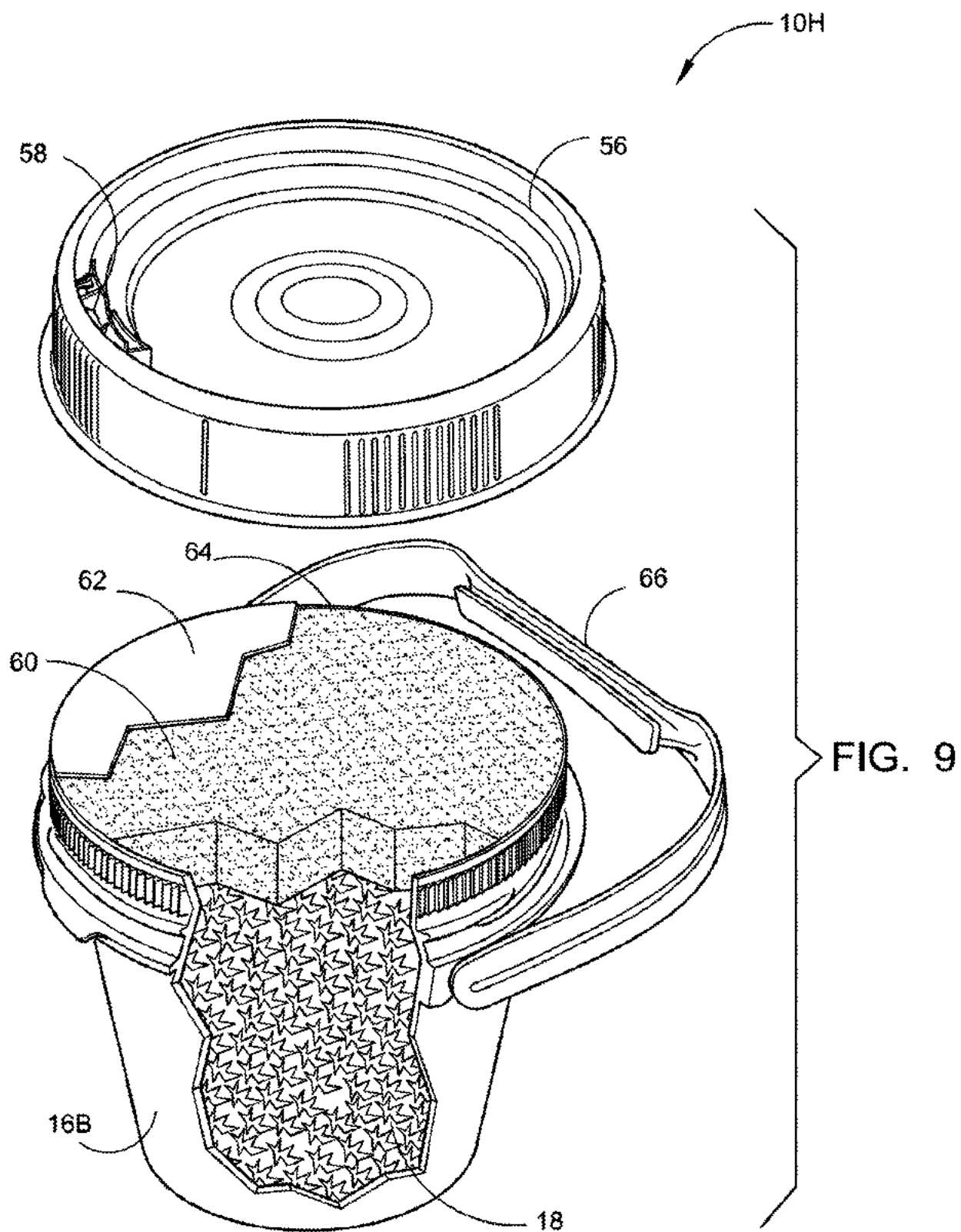


FIG. 8

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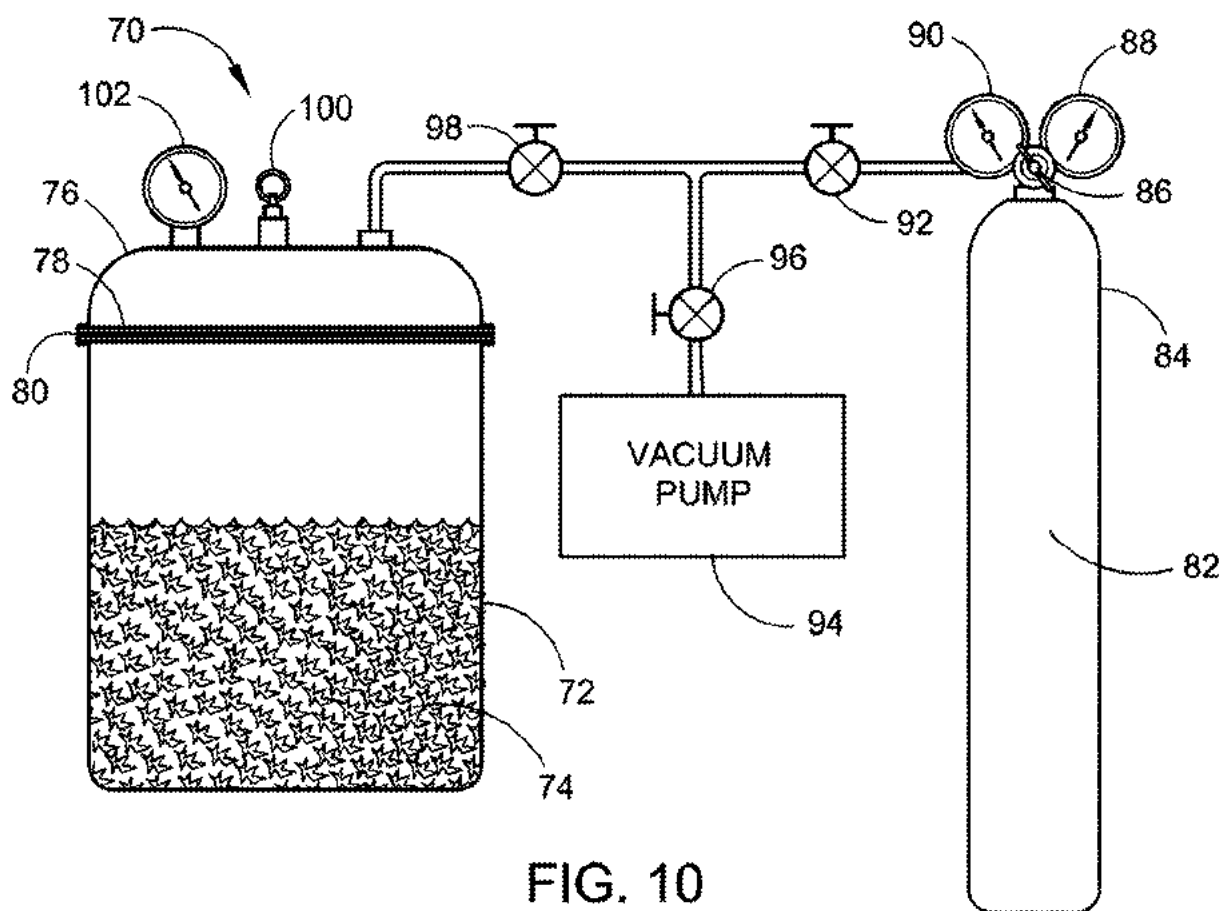


FIG. 10

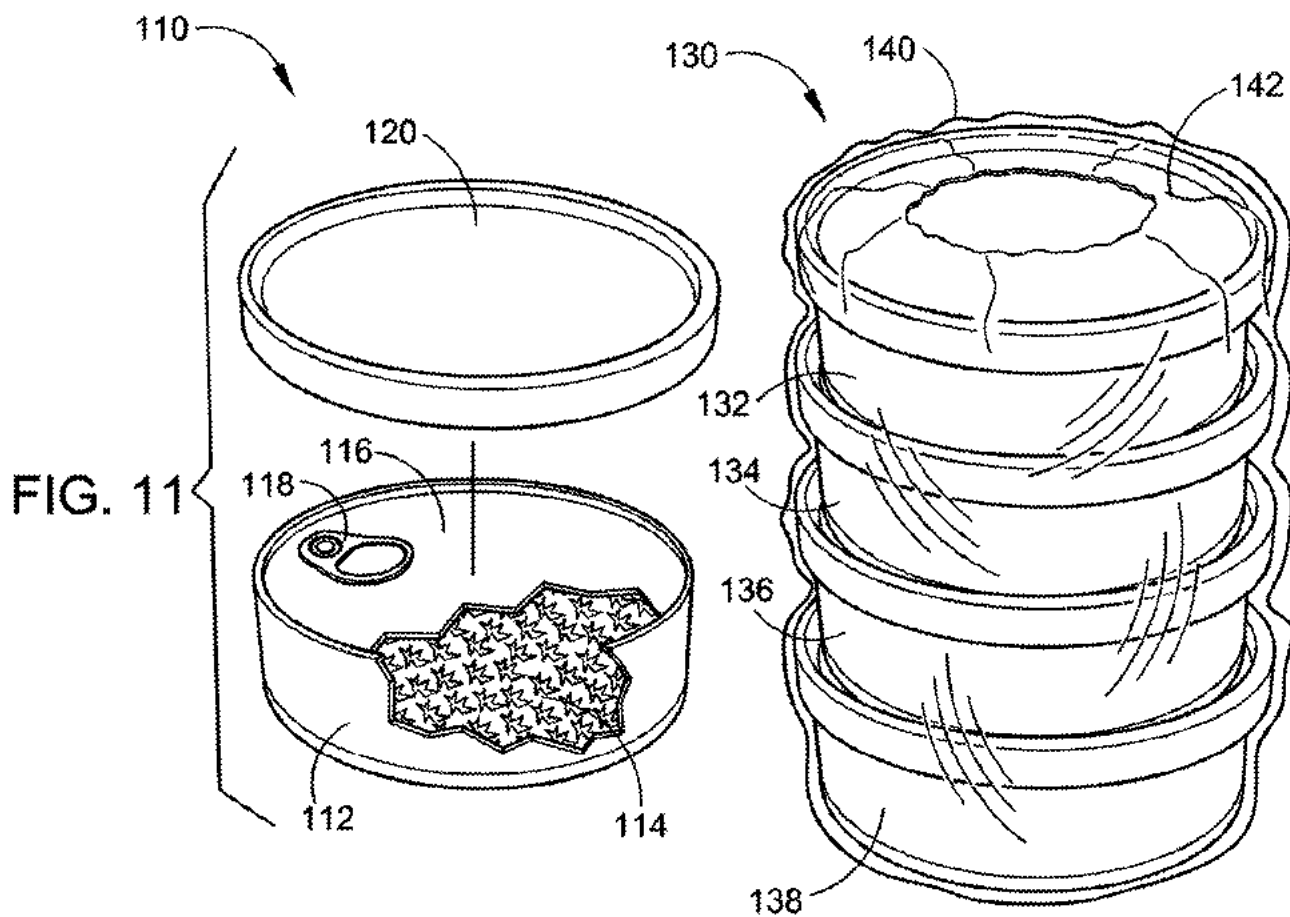


FIG. 12

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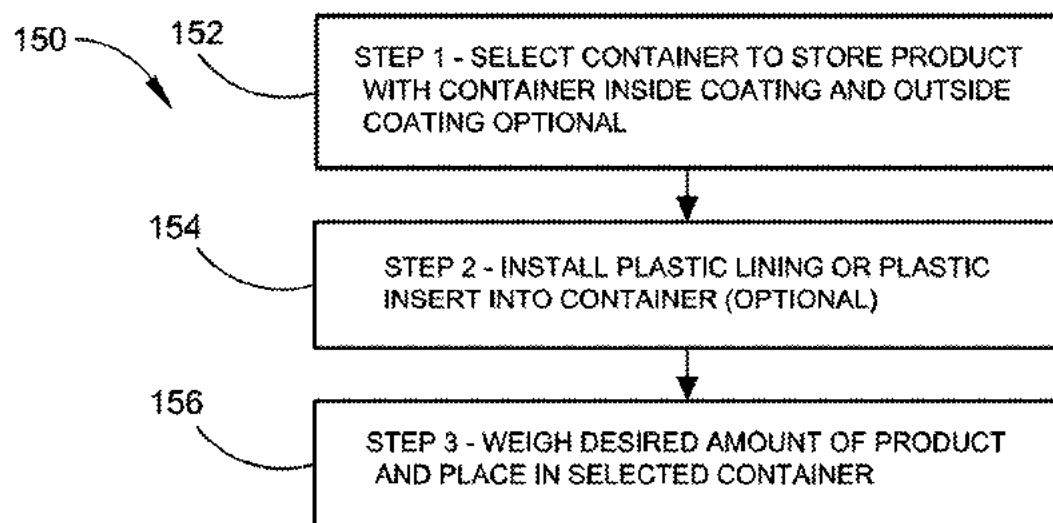


FIG. 13

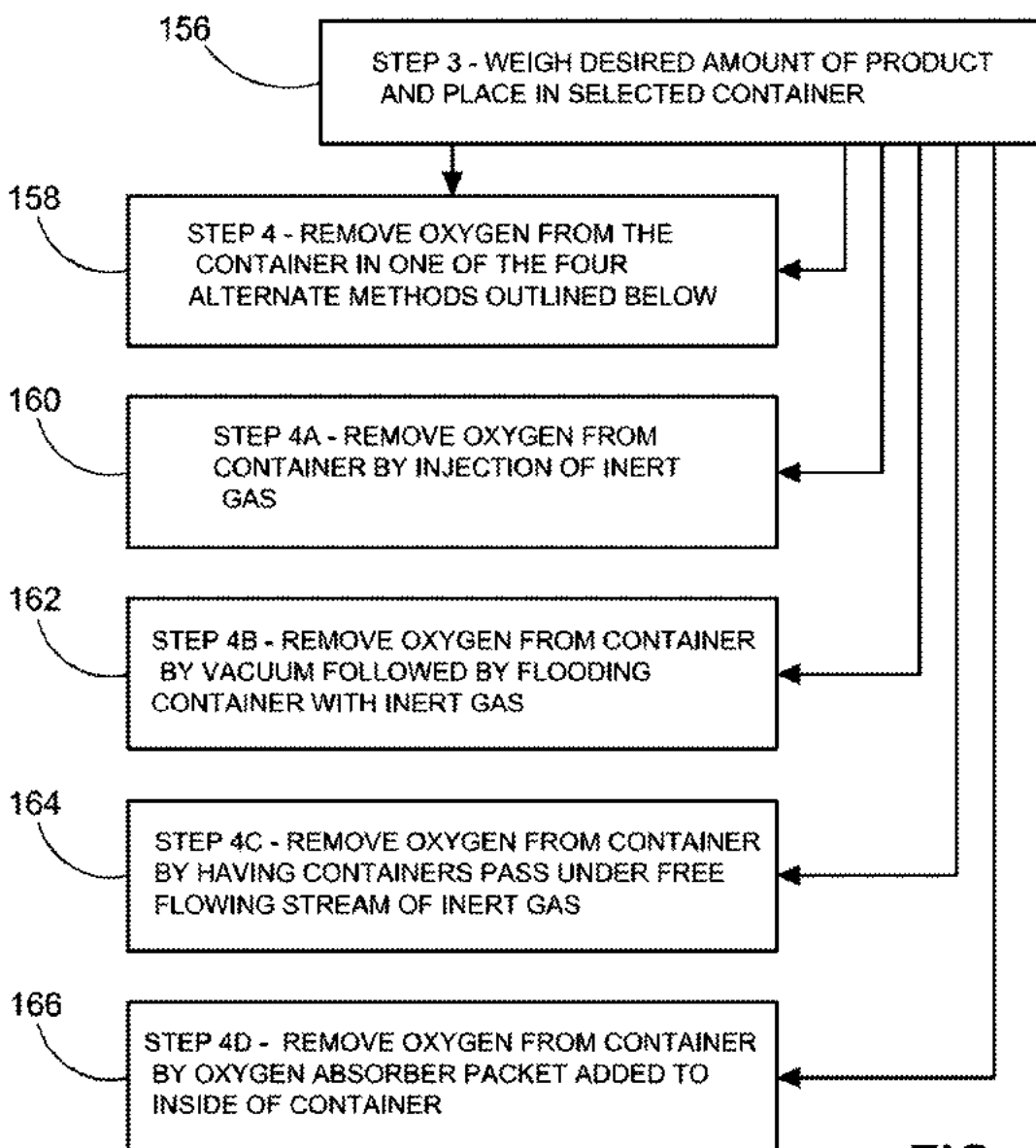


FIG. 14

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US15/56158

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B65B 31/04; B65D 50/00, 81/20 (2015.01)

CPC - B65B 31/04; B65D 81/2007, 2203/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - B65B 31/00, 31/02, 31/04; B65D 50/00, 81/00, 81/02, 81/18, 81/20, 81/24, 85/00 (2015.01)

CPC - B65B 7/00, 29/00, 31/02, 31/04, 61/26; B65D 81/02, 81/18, 81/20, 81/2007, 81/2015, 81/2038, 81/24, 81/266, 2203/02, 2203/12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data); Google; Google Scholar; ProQuest; Container*, package*, canister*, receptacle*, hermetic*, airtight*, watertight*, waterproof*, sealed, impervious, liner*, lining*, coat*, identif*, indicia, indicat*, lid*, cover*, cap, vacuum*, pressur*, evacuat*, inert*, gas*, plast*, label*, closure*, inner*, interior*, inside*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,961,000 A (SANFILIPPO, J. J. et al.) 05 October 1999; figures 1 and 4; column 5, lines 25-60; column 7, lines 1-20	19-20
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Y		15-17
Y	US 2012/0061263 A1 (SIBLEY, D. P.) 15 March 2012; figures 1; paragraphs [0001], [0017], [0018], [0027], [0043], [0051]	1-18
Y	US 3,281,008 A (D'ANDREA, A. R.) 25 October 1966; figures 1-2; column 1, lines 20-35; column 3, lines 15-20	1-18
A	US 5,402,906 A (BROWN, R. S. et al.) 04 April 1995; entire document	1-20

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

10 December 2015 (10.12.2015)

Date of mailing of the international search report

08 JAN 2016

Name and mailing address of the ISA/

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-8300

Authorized officer

Shane Thomas

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

EXHIBIT F

PACKAGING SUPPLY AGREEMENT

High Volume/Inserter System with Backup Seamer

This Packaging Supply Agreement, dated DEC 22, 2017 (the "Effective Date"), is by and between N2 Packaging Systems, LLC, an Arizona limited liability company ("N2 Packaging"), N2 PACK CANADA, INC and its Affiliates ("Processor").

RECITALS:

WHEREAS, N2 Packaging provides a Packaging Process, packaging materials and packaging equipment, that utilizes N2 Packaging's Proprietary Process; and

WHEREAS, Processor desires to utilize, on the Preferred Exclusive Basis, in its business operations N2 Packaging's Packaging Process that utilizes the Proprietary Process, including the purchase of packaging materials; and

WHEREAS, N2 Packaging is agreeable to provide to Processor, on the Preferred Exclusive Basis, its Packaging Process that utilizes its Proprietary Process, including the sale of packaging materials to Processor, pursuant to and in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the foregoing recitals, and the mutual promises and covenants set forth below, N2 Packaging and Processor mutually agree as follows.

1. Definitions.

1. *Affiliates*: any entity that controls, is controlled by or is under common control with another entity, including the owners of any such entity. An entity is deemed to be in control of another entity (controlled entity) if the former owns directly or indirectly any of the outstanding voting equity of the controlled entity (or other equity or ownership interest if such entity is other than a corporation).
2. *Agreement*: this Agreement, as it may be amended, including all attachments, exhibits and addenda attached hereto.
3. *Commencement Date*: the date of delivery of the packaging equipment as set forth in Section 9 hereof.
4. *Confidential Information*: the existence and terms of this Agreement and N2 Packaging's Proprietary Process, and all information disclosed, whether orally or in writing, by one party to the other under this Agreement, and as otherwise identified or designated as "CONFIDENTIAL" at the time of disclosure, with oral disclosures being summarized in writing and provided to the other party within thirty (30) days after disclosure.

5. *Effective Date*: the date of this Agreement provided above.
 6. *Packaging Process*: the use of the Proprietary Process to seal hermetically Product in a can for distribution and sale to consumers as described in Patent No. US 8,863,947 B2 issued October 21, 2014.
 7. *Preferred Exclusive Basis*: The limitation on N2 Packaging to grant in Canada no more than two (2) licenses to use the Packaging Process that utilizes the Proprietary Process.
 8. *Product*: Products using or otherwise involving the Proprietary Process.
 9. *Proprietary Process*: N2 Packaging's patented proprietary process (described in that certain patent issued: Patent No. US 8,863,947 B2 issued October 21, 2014), including, without limitation, any and all modifications, betterments and advancements to said proprietary process, whether or not patentable.
 10. *Third Party*: any individual, corporation, partnership, trust or other business organization or entity, governmental entity, and any other recognized organization other than the parties hereto and their Affiliates.
2. **Licensing Fee and Use of Packaging Process.** Subject to, and in accordance with, the terms and conditions of this Agreement, and in consideration of a one-time licensing, setup and training fee of Five Thousand and 00/100 Dollars (\$5,000.00), N2 Packaging shall provide to Processor its Packaging Process that utilizes the Proprietary Process on the revocable Preferred Exclusive Basis, together with the right to utilize "N2" in its business name (such as "N2 Canada") and the sale of the high-volume seamer and the backup low-volume seamer (the "packaging equipment") listed and priced in Attachment A, and the packaging materials in the herein provided minimum required quantities. Processor shall utilize N2 Packaging's Packaging Process that utilizes the Proprietary Process with the packaging equipment, on the revocable Preferred Exclusive Basis solely for Product, together with the purchase of packaging materials from N2 Packaging. N2 Packaging shall have the right to revoke immediately the license to use the Proprietary Process upon breach by Processor of the terms of this Agreement. Processor shall pay the one-time licensing fee on the Effective Date of this Agreement. Further, the labeling of Processor's packaged Product shall include N2 Packaging's logo utilizing N2 Packaging's label template.

Processor acknowledges the quality of the Product is material to N2 Packaging's grant to Processor of the license to use, and Processor's use of, the Packaging Process that utilizes the Proprietary Process. Accordingly, Processor shall observe, follow and conform to the N2 Packaging Requirements for Use and Quality Control Specification set forth at Attachment B hereof.

Processor shall utilize N2 Packaging's Packaging Process only with the cans of the packaging materials purchased (as provided in Sections 4 and 5 hereof) from N2 Packaging. Processor shall pay to N2 Packaging an amount equal to sixty cents (60¢) per can for each unauthorized can Processor used to package Product utilizing N2 Packaging's Packaging Process in addition to N2 Packaging's right to revoke immediately

the license to use the Proprietary Process upon Processor's breach of this Agreement and any other remedy to which N2 Packaging may be entitled under this Agreement as a result of Processor's breach or default. Processor acknowledges and agrees N2 Packaging will suffer damages if Processor utilizes cans not purchased as part of the packaging materials purchased from N2 Packaging to package Product utilizing N2 Packaging's Packaging Process, and the parties further acknowledge and agree that it is impractical and speculative to ascertain with any degree of certainty the actual amount of such damages. Consequently, the parties hereby agree that the foregoing sixty cents (60¢) per can for each unauthorized can Processor used to package Product utilizing N2 Packaging's Packaging Process represents a reasonable estimate of such damages, considering the circumstances existing on the date of this Agreement; and N2 Packaging shall have the right in such event to recover such sum from Processor in addition to any other remedies N2 Packaging may be entitled under this Agreement.

3. **Term.** This Agreement shall be for a term of twelve (12) consecutive months, commencing on the Commencement Date, and shall automatically renew for successive terms of twelve (12) consecutive months until either party gives not less than ninety (90) days written notice of termination to be effective at the end of any such term. Notwithstanding said automatic renewal of this Agreement, any provision of this Agreement and anything to contrary in this Agreement, in the event Processor fails to meet the High Volume Minimum Requirement (as defined in Section 6 hereof) N2 Packaging may, in its sole and absolute discretion, terminate this Agreement at the end of any term.
4. **Packaging Materials.** The packaging materials consist of the following:
 - Metal Food Grade Can
 - Metal Pull Tab Lids
 - Plastic Lid / overcaps (non CR)
 - Child Resistant/ Sr. Friendly Lid (CPSC 16 CFR Part 1700.20) available for additional charge
 - Label printing services and graphic design work available for additional charge
5. **Packaging Material Purchase Price.** Pursuant to the tiered pricing schedule attached hereto as Attachment E (based upon the number of cans purchased under this Agreement), N2 Packaging shall sell to Processor, and Processor shall purchase from N2 Packaging:
 - The metal food grade can in 211 x 30 mm commonly referred to as "N2 inhouse (1/8) ounce" size can, in pallet increments; and
 - The metal food grade can in 211 x 101.5 commonly referred to as "(1/8) ounce" size can, in pallet increments; and
 - The metal food grade can in 211 x 108 commonly referred to as "Big Bud Cans" cans, in pallet increments; and
 - The metal food grade can in 211 x 114.5 commonly referred to as "Edible & Bud Cans" "(1/4) ounce" size can, in pallet increments;

- Metal Pull Tab Lids for the amount of ten cents (10¢) each;
- Plastic Lid / overcaps for the amount of three cents (3¢) each;
- Child Resistant/ Sr. Friendly Lid (CPSC 16 CFR Part 1700.20) available for additional charge;
- Label printing services and graphic design work available for additional charge.

The number of cans in a pallet vary.

Payment Terms: Processor shall pay one-half (½) of the purchase price for said packaging materials at the time of the placement of an order and the balance of the purchase price upon delivery of each such order.

6. **High Volume Minimum Requirements of Packaging Materials.** Processor shall order not less than the number of metal food grade cans (whether of the one-eighth ($\frac{1}{8}$) ounce size can or of the one-quarter ($\frac{1}{4}$) ounce size can) in pallet increments to meet or exceed the applicable projection in the projections attached hereto as Attachment D for the sale of Product during the consecutive twelve (12) month period of each term of this Agreement (the "High Volume Minimum Requirement"), which obligation shall survive the termination of this Agreement. Processor's orders of said packaging materials in excess of the High Volume Minimum Requirement shall be in pallet increments.

In the event Processor fails to meet or exceed eighty percent (80%) of the High Volume Minimum Requirement of a consecutive twelve (12) month term of this Agreement, N2 Packaging may, in its sole and absolute discretion, terminate the Preferred Exclusive Basis of this Agreement at the end of such consecutive twelve (12) month term.

7. **Packaging Materials Pricing Changes.** The purchase price for the respective sizes of the metal food grade cans and other packaging materials shall be subject to adjustment by N2 Packaging giving not less than one hundred twenty (120) days written notice; provided, however, any such adjustment shall be neither in excess of ten percent (10%) nor more frequent than any six (6) month period during a term of this Agreement. The pricing of the respective sizes of the metal food grade cans and other packaging materials and the High Volume Minimum Requirement shall be subject to negotiation at any renewal of this Agreement.
8. **Purchase of Packaging Equipment.** N2 Packaging shall sell to Processor, and Processor shall purchase from N2 Packaging, the packaging equipment listed and priced in Attachment A.
9. **Delivery and Installation of Packaging Equipment; Instruction and Training.** N2 Packaging shall deliver to Processor and install, on or before JAN 30/18, the packaging equipment at the following location: 515 BAY AVE - Kalamazoo (the "Delivery Location"). Processor shall provide, at the Delivery Location, the building, physical facilities, any and all governmental permits and approvals, power source and supply, equipment and apparatus, and all such other provisions appropriate, required and necessary to and for the placement, installation and operation of the packaging equipment at the Delivery Location. N2 Packaging shall provide to Processor up to 3 days (24 hours

total) of instruction and training in the operation and maintenance of the packaging equipment.

1. *Maintenance, Service and Repair of Standard Nitrogen Inerters.* Processor shall comply with the Servicing and Maintenance agreement set forth as Attachment C hereof or go directly through Green Tech Innovations, LLC, an Arizona limited liability company ("GTI").
 2. *Maintenance, Service and Repair of other Packaging Equipment.* Warranties for the packaging equipment shall come solely from and through the manufacturer of the packaging equipment. N2 Packaging does not make, and expressly disclaims, any and all warranties and representations of and pertaining to the packaging equipment. Processor shall be responsible for and perform, at its sole cost and expense, all maintenance, service, and repair to maintain and keep the packaging equipment in good operating condition and repair (the "Routine Maintenance").
 3. *Packaging Equipment Parts and Component Inventory.* Processor shall maintain, at its cost and expense, the inventory of the parts and components of and to the packaging equipment.
 4. *Operation of Packaging Equipment.* Processor shall operate the packaging equipment at its sole cost and expense and risk; and shall bear the entire risk of loss, theft, damage and destruction of the packaging equipment, including the standard Nitrogen Inerters, from any cause whatsoever, and no loss, theft, damage or destruction of the packaging equipment shall relieve Processor of its obligations under this Agreement. Processor shall be solely responsible for compliance with any and all federal, state, and local law and regulation pertaining and associated to the operation and use of the packaging equipment, inclusive of the standard Nitrogen Inerters. Processor shall further bear all risk that the packaging equipment may become unusable for any reason, including, not by way of limitation, any federal, state, and local law and regulation.
10. **Exclusivity.** During the term of this Agreement, Processor: (i) shall not utilize a packaging line of any type to package Product utilizing N2 Packaging's Packaging Process; and (ii) shall not utilize N2 Packaging's Proprietary Process or the packaging equipment for any purpose or reason other than to package its Product. N2 Packaging, at its sole cost, shall have the right to audit and inspect the Processor's facilities for the purpose of verifying Processor's adherence to the forgoing and compliance with this Agreement. N2 Packaging shall have the right to terminate this Agreement immediately upon breach by Processor of the terms of this Agreement, and specifically this Section, and may seek injunctive relief upon any violation or threatened violation of the terms of this Section, in addition to all other rights and remedies available at law or in equity, without having to post a bond or other security. Upon the expiration or termination of this Agreement, the license to utilize N2 Packaging's Proprietary Process shall immediately cease, without the necessity of notice or affirmative action by N2 Packaging.



11. Ownership of Proprietary Process; Confidentiality.

1. *Proprietary Process.* N2 Packaging owns the Proprietary Process, including all applicable patent(s). Processor shall have no right, title or interest in or to the Proprietary Process, except the limited license to utilize the Proprietary Process pursuant to and in accordance with this Agreement. Processor shall have no rights under any technology rights, whether patentable or not, or any patents, patent applications, trade secrets or other proprietary rights of N2 Packaging. Processor shall not modify or otherwise reverse engineer the Proprietary Process; and shall not seek any intellectual property protection, including, without limitation, any patent relating to or otherwise directed to the manufacture or use of the Proprietary Process in conjunction or in combination with any other product or process utilizing, employing or otherwise applying the Proprietary Process or any portion or derivations thereof. Processor shall execute such documentation and take other steps requested by N2 Packaging to maintain, establish and protect N2 Packaging's ownership interests in the Proprietary Process, and Processor shall not take any actions inconsistent with such ownership by N2 Packaging. N2 Packaging shall have the right to terminate this Agreement immediately upon breach by Processor of the terms of this Agreement, and specifically this Section, and may seek injunctive relief upon any violation or threatened violation of the terms of this Section, in addition to all other rights and remedies available at law or in equity, without having to post a bond or other security.

2. *Mutual Confidentiality; Required Disclosure by Law.* The Confidential Information received by a party (the "Receiving Party") from the other party (the "Disclosing Party") shall not be disclosed by the Receiving Party to any Third Party without the express written consent of the Disclosing Party; and shall not be used by the Receiving Party for purposes other than those contemplated by this Agreement. Disclosure of a Disclosing Party's Confidential Information is limited to the individuals of N2 Packaging and its Affiliates, and of Processor and its Affiliates, who have a need to know and are subject to the terms of confidentiality of this Agreement. If, in the opinion of a party's counsel, any of a Disclosing Party's Confidential Information is required to be disclosed pursuant to law, regulation, or court order, the Receiving Party shall give the Disclosing Party prompt written notice in order to allow the Disclosing Party to take whatever action it deems necessary to protect its Confidential Information. In the event that no protective order or other remedy is obtained, or the Disclosing Party waives compliance with the terms of this Agreement, the Receiving Party will furnish only that portion of the Confidential Information that its counsel advises is legally required, and any such disclosure under this Section shall not be a violation of this Agreement. N2 Packaging and Processor hereby acknowledge and affirm that certain confidentiality agreement to which they are parties (the "Existing Confidentiality Agreement"). The terms, provisions and covenants of the Existing Confidentiality Agreement are hereby incorporated into this Agreement, by reference. In the event of any conflict or ambiguity between this Agreement and the Existing Confidentiality Agreement, the terms,

provisions and covenants providing the most protection of confidentiality to the Disclosing Party shall govern and control.

3. *Standard of Care.* Each party shall exercise the same care and measures to protect the Confidential Information of the other party as it uses to protect its own confidential information and trade secrets, provided, however, that in no event will the measures taken be less than reasonable.
12. **Failure of Performance.** Failure of N2 Packaging to deliver, or Processor to take delivery of, the packaging materials in accordance with this Agreement shall not be deemed a default, and shall not subject N2 Packaging or Processor to any liability to the other party, if: (i) such failure is caused by any act of God; or (ii) is attributable to the other party; (iii) or is caused by any other circumstance beyond the reasonable control of N2 Packaging or Processor; or (iv) by the interruption of or delay in transportation, production failure, or inadequacy or failure of material, equipment or breakdown; or (v) act(s) of terrorism; or (vi) labor trouble (whether or not rising to the level of a strike) or (vii) vendor supply delays, or raw materials or packaging shortages; or (viii) violation or compliance with any governmental action, laws, regulations, requests or restrictions of any jurisdiction or agency thereof (each, an "Event of Force Majeure"), whether such circumstances now exist or hereafter arise. The party whose performance is prevented shall use reasonably diligent efforts to cure such failure to the extent such failure may be cured. If either party claims an Event of Force Majeure, it shall immediately notify the other party in writing at the commencement and termination of such claim.
13. **Product Warranty.** N2 Packaging warrants to Processor only that the packaging materials will be suitable for the packaging of the Product. In the event of N2 Packaging's breach of this warranty, N2 Packaging shall, at Processor's option: (i) replace the defective packaging materials and ship the replacement packaging materials to Processor at N2 Packaging's expense; or (ii) refund the amount paid by Processor for the defective packaging materials to Processor. The exercise of one of these two remedies shall be Processor's sole remedy for N2 Packaging's breach of warranty. N2 Packaging makes no other warranties, express or implied, of any other type or nature, including, not by way of limitation, warranties of merchantability or fitness for a particular purpose, except as expressly provided herein.

IN NO EVENT WILL N2 PACKAGING BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM A BREACH OF WARRANTY INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, RENTAL, PURCHASE OF REPLACEMENT PRODUCT, OR OTHER COMMERCIAL LOSS.

14. **Representations of Processor; Indemnity by Processor.** Processor represents and warrants to N2 Packaging that Processor has secured from applicable governmental jurisdictions, and possesses and shall maintain in good standing during the term of this Agreement and any renewal thereof, any and all licenses, permits, authorizations and approvals necessary or required for the operation of Processor's business. Processor shall indemnify, defend, and hold N2 Packaging and its members, employees, agents, representatives, and Affiliates harmless from and against any and all Third Party claims,

causes of action, criminal charges or indictments, judgments and/or settlement costs, other costs and expenses (including, but not limited to, reasonable attorney fees and expenses), losses, or liabilities of any kind (collectively, "Liabilities") arising out of or resulting from any of the following: (i) Processor's business activities, negligence or willful misconduct; (ii) any theory of strict liability in tort with regard to the Product or any other product of Processor, or Processors manufacturing processes, shipment practices or processes, and distribution of the Product or any other product of Processor; (iii) any infringement or alleged infringement of any patent, trademark, or other proprietary right of a Third Party regarding the Product, or Processor's manufacturing processes, shipment practices or processes, and distribution of the Product or any other product of Processor; and (iv) any injury or death of persons or injury to property arising from use of the Product, Processor's manufacturing processes, shipment practices or processes, and distribution of the Product or any other product of Processor. Processor shall maintain during, and for a period of one year after, the term of this Agreement insurance coverage with N2 Packaging named as an additional insured party, to protect against liability, including product liability, that may arise out of or relate to the Product, Processor's business activities, to include, not by way of limitation, Processor's manufacturing processes, shipment practices or processes, and distribution of the Product or any other product of Processor, and any injury or death of persons or injury to property arising from use of the Product, Processor's manufacturing processes, shipment practices or processes, and distribution of the Product or any other product of Processor in minimum limits of \$1,000,000. Processor shall deliver to N2 Packaging a certificate of insurance demonstrating the existence of such insurance coverage.

15. **Notices.** Any notice, or other communication required or permitted to be given under this Agreement ("Notices") shall be in writing and shall be: (i) personally delivered, (ii) delivered by a reputable overnight courier, or (iii) delivered by certified mail, return receipt requested, and deposited in the United States mail, postage prepaid. Notices shall be deemed received at the earlier of actual receipt or (1) one business day after deposit with an overnight courier as evidenced by a receipt of deposit; or (2) three business days following deposit in the United States mail, as evidenced by a return receipt. Notices shall be directed to the parties at their respective addresses shown below, or such other address as either party may, from time to time, specify in writing to the other in the manner described above:

N2 Packaging: N2 Packaging Systems, LLC
551 Addison Ave. W.
Twin Falls, ID 83301

Processor: N2 PACK CANADA.
945 Skema Court
Kelowna BC CANADA
V1V 2B3

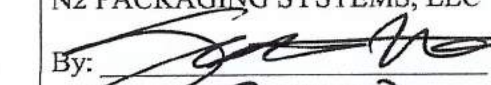
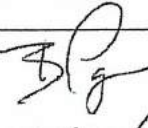
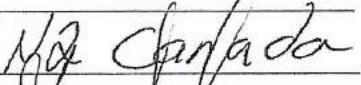
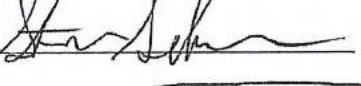
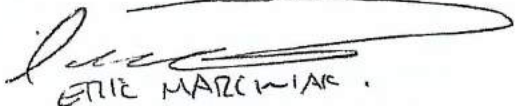
16. **Relationship of Parties.** The relationship of the parties under this Agreement is that of independent contractors. Nothing contained in this Agreement is intended or is to be construed so as to constitute the parties as partners, joint ventures, or either party as an agent or employee of the other party. Neither party has any express or implied right under

this Agreement to assume or create any obligation on behalf of or in the name of the other party, or to bind the other party to any contract, agreement or undertaking with any Third Party, nor shall no conduct of the parties be deemed to infer such right.

17. **Assignment.** This Agreement may not be assigned or transferred by either party, whether by operation of law or otherwise, without the prior written consent of the other party.
18. **Successors and Assigns.** This Agreement shall inure to the benefit of and be binding upon the parties hereto and their successors and permitted assigns.
19. **Waiver.** No waiver by either party of any default, right or remedy shall be effective unless in writing, nor shall any such waiver operate as a waiver of any other or of the same default, right or remedy on a future occasion.
20. **Jurisdiction and Venue.** Any and all claims, questions or disputes regarding the interpretation, performance and enforceability of this Agreement, the rights and remedies of the parties hereunder, and all related actions or counterclaims shall be initiated and prosecuted in the courts of the state of Arizona located in Phoenix, Maricopa County, Arizona. The parties agree to submit to the jurisdiction and venue of said courts.
21. **Governing Law.** This Agreement shall be construed and enforced in accordance with the laws of the state of Arizona, without regard to its choice of law provisions.
22. **Subject Matter of Agreement; Waiver of Defense of Illegality.** The subject matter of this Agreement is N2 Packaging and Processor contracting for N2 Packaging to provide to Processor its Packaging Process that utilizes N2 Packaging's Proprietary Process together with N2 Packaging's sale of packaging materials to Processor. N2 Packaging and Processor expressly, knowingly and voluntarily waive any and all defenses to the enforceability of this Agreement based upon illegality, to include without limitation: (i) any defense that the subject matter of this Agreement is illegal under any federal, state, or local law or regulation; (ii) any defense that the subject matter of this Agreement is contrary public policy; and (iii) any defense that the subject matter of this Agreement involves, includes, implicates, entails or otherwise concerns illegal activities under any federal, state, or local law or regulation.
23. **Attorney Fees and Costs.** In the event any party to the Agreement is required to institute legal proceedings to enforce the terms of this Agreement, the prevailing party in such legal proceeding shall be entitled to an award of all reasonable attorney fees and costs incurred at all stages of such legal proceeding, including any appeal therefrom.
24. **Survival of Certain Covenants.** Notwithstanding the termination or expiration of this Agreement and anything to the contrary in this Agreement, the terms, provisions and covenants of Section 12 of this Agreement shall survive the termination or expiration of this Agreement.
25. **Severability.** If any term or provision of this Agreement shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other term or provision hereof, and there shall be, to

the extent possible, substituted for the provision at issue a valid, legal and enforceable provision as similar as possible to the provision at issue.

26. **Entire Agreement, Amendment.** This Agreement sets forth the entire understanding of the parties with respect to the subject matter hereof and supersedes all prior agreements, written and oral, between the parties. No modification of any of the terms of this Agreement shall be deemed to be valid unless it is in writing and signed by both parties. No course of dealing or usage of trade shall be used to modify the terms and conditions herein.
27. **Counterparts; Facsimile Signatures.** This Agreement may be executed in any number of counterparts, each of which counterpart, when so executed and delivered, shall be deemed to be an original, and all of which counterparts, taken together, shall constitute one and the same instrument. N2 Packaging and Processor further agree that facsimile signatures by the parties shall be binding to the same extent as original signatures.

<p>"N2 Packaging"</p> <p>N2 PACKAGING SYSTEMS, LLC</p> <p>By: </p> <p>Its: <u>CEO</u></p> <p>By: _____</p> <p>Its: _____</p>	<p>"Processor"  BRENDAN POGUE</p> <p>By: </p> <p>Its: </p> <p> ETIE MARCHIAK.</p>
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<p>"N2 Packaging"</p> <p>N2 PACKAGING SYSTEMS, LLC</p> <p>By: _____</p> <p>Its: _____</p> <p>By: _____</p> <p>Its: _____</p>	<p>"Processor"</p> <p><u>N2 PACK CANADA.</u></p> <p>By: <u>ERIC MARCINIAK.</u></p> <p>Its: <u>PARTNER REP.</u></p>
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Attachment A

Supplied by Green Tech Innovations, LLC

Equipment:

High Volume & Backup Low Volume Seamer	\$29,600
Warranty from manufacturer	
Additional equipment available upon request	
Shipping and Packaging costs to be paid by Processor	TBD

Financing Terms Available

A handwritten signature in black ink, consisting of stylized, overlapping loops and strokes, located in the bottom right corner of the page.

Attachment B

N2 Packaging Requirements for Use and Quality Control Specification

- Fully comprehensive lab testing on each crop that is to be packaged into N2 (THC & Cannabinoid levels, pesticide, mold, mildew, fungi, and any foreign containments) samples should be random batch samples taken from each strain and each growing environment ex. (greenhouse, flower room, field, etc.) If samples of same strain are taken from different environments, then average of THC level is adequate
- Only highest quality top/choice buds/flowers should be used with N2 packaging, no bottom flowers or anything that is not fully developed/mature (N2 will control thru S.T.A.T.S.)
- No machined wet-trimmed product should be used with N2 packaging, and hand-trimmed is recommended method. Use of a no tumble dry-trimmer to process product can be assessed on a case by case basis
- Moisture levels of any cannabis flower place into N2 packaging should be between 8-12% and never >15% to avoid mold, mildew, and fungi growth, we recommend moisture levels no <8% and no >10% to avoid an over dried/moist product
- N2 packaging must be done in room separate from all other cultivation areas with proper filtration which is free of any airborne containments
- No use of banned PGR's, chemical spray pesticides, foliar flower enhancers, or any chemical spray applications on any flowering plants to be used with N2 packaging
- Hairnets, beard-nets, masks and gloves should be worn by all employees from trimming to processing and packaging to avoid contamination
- The final packaged product should be stored in a cool and secure location prior to distribution

A handwritten signature in black ink, consisting of several fluid, overlapping loops and strokes, positioned in the lower right quadrant of the page.

Attachment C

GTI Service Agreement

THIS SERVICE AGREEMENT (this "Service Agreement") is entered into on or as of the 22 day of DEC 22, 2017 (the "Effective Date"), by and between Green Tech Innovations, LLC, which is a sales, service, and installation company, office located at 551 Addison Ave. W, Twin Falls, ID 83301, and located at 515 BAY AVE. ("Customer").
Kelowna BC

Scope of Work:

Green Tech Innovations, LLC shall provide the following service production set forth in this Service Agreement. Green Tech Innovations, LLC will provide services listed based on Manufactured Recommended Service, in accordance with cans processed. The only equipment covered under this Service Agreement are Green Tech Innovations, LLC provided items. All equipment will be warranted as per manufactured specs.

Services Provided by Green Tech Innovations, LLC:

At the time of installation, all regular maintenance, excluding the 8-hour operator level maintenance, includes: grease packing scamer head bearings, index wheel bearings and verifying scamer die clearances, replacement of normal wear items, and lubricating inerter plunger spring.

Services Provided by NZ PAUL CANADA ("Customer"):

8- hour operator level maintenance including: grease fittings on scamer head, oiling lifter shaft, oiling cam and lifter, checking and filling pneumatic oil revision, checking bolts, and changing can height. (Green Tech Innovations, LLC will provide training.)

Excluded Services:

Customer understands and agrees that services required to recover from failures and/or incidents caused by any of the following circumstances are not considered normal maintenance and are not covered under this Service Agreement.

- Services and repair made necessary due to accidents or acts of God, damage from fire, water, wind, earthquakes, lightning, terrorism, transporting equipment, vandalism, or burglary;
- Service and repair made necessary by the alteration or modification of equipment other than that authorized by Green Tech Innovations, LLC;
- Service and repair of damage or problems caused by neglect, malicious activity, or misuse including, without limitation, use of the system(s) for purpose other than which it was designed, by the Customer, its employees, or third-party contractors;
- Service or repair due to electrical damage caused by electrical wiring at system location or resulting from electrical surges, sags, or spikes;
- Green Tech Innovations, LLC reserves the right to use discretion to determine if the issue is a manufacturing defect or user error. All manufacturing defects are repaired by Green Tech Innovations, LLC at no cost to customer. If deemed as user error due to lack of maintenance or damage to the machine, customer is responsible for all expenses to get equipment back to original working state.

Service and Repair Rates for Repaid of Excluded Services listed below:**Technicians:**

Straight Time	\$75.00 per hour- \$600.00 per 8-hour day
Overtime & Saturday	\$125.00 per hour - \$1,000.00 per 8-hour day
Sunday	\$200.00 per hour - \$ 1,600 per 8-hour day

Travel Time Invoiced by Above Rates**Transportation and Living Expenses**

By Company Vehicle	\$.59/mile
By Rail, Plane, Rented Car, or Cab Overnight	Actual Cost plus 15%
Lodging & Meals	Actual Cost plus 15%

Materials & Equipment

Parts or materials purchased and used on job	Normal Charge
Replacement parts carried by serviceman	Normal Charge

If the customer moves locations, and requires GTI's assistance, they will be responsible for any cost associated.

Upgrade Fees:

Green Tech Innovations LLC will charge customer a \$3,000.00 fee for any upgrades on scanner equipment.

Service Levels

GTI is the first contact for all equipment services. Customer support is available at all times. In a circumstance that we are not able to answer the phone, your call will be returned within 24 hours. If the problem cannot be solved via over the phone or facetime, we will send a technician as soon as possible. All phone services are complementary. For technician site visits, rates are listed below.

Customer Obligations:

- Customer shall be responsible for the following
 - Customer may be required to conduct preliminary diagnostic steps or provide additional information related to a support request, prior to a technician being dispatch to Customer's facility
 - Provide adequate access to facility

BY SIGNING THIS DOCUMENT, I AM ACKNOWLEDGING THAT I AGREE TO ALL TERMS AND CONDITIONS LISTED ABOVE

N2 PPK CANADA

Company Name

Electronic Signature

December 22/17

Date

Attachment D**PROJECTIONS**

NZ Packaging Canada - Packaging production for Canadian market

2018													Annual Tot
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	2018
Mech	400	600	800	1000	1100	1400	1600	1800	2000	2200	2400	2600	18000
Rec (lbs)													
Total	400	600	800	1000	1100	1400	1600	1800	2000	2200	2400	2600	18000
Cum	51,886	77,826	103,771	129,714	155,657	181,600	207,547	233,497	259,457	285,407	311,357	337,307	4,000,000
Mach	1	1	2	2	3	3	4	5	6	7	9	10	30
2019													Annual Tot
	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	2019
Mech	1600	1600	1200	1400	1600	1800	2000	2100	2200	2300	2400	2500	18000
Rec (lbs)	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	80000
Total	6000	7500	6200	6900	8600	10300	11800	12700	13400	14100	15400	16500	117800
Cum	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857	1,117,857
Mach	10	12	12	13	14	15	16	17	18	19	20	21	21
2020													Annual Tot
	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	2020
Mech	5200	5400	5500	5600	6000	6200	6400	6600	6800	7000	7200	7400	73000
Rec (lbs)	15000	16000	17000	17500	18000	18500	19000	19500	20000	20500	21000	21500	180000
Total	15520	15900	16500	17350	18600	18700	19400	20100	20800	21500	22200	22900	253000
Cum	1,971,857	2,042,857	2,153,857	2,244,857	2,334,857	2,425,857	2,516,857	2,607,857	2,698,857	2,789,857	2,880,857	2,971,857	2,971,857
Mach	22	23	24	25	26	27	28	29	30	31	32	33	33

Attachment E**TIERED PRICING SCHEDULE**

Tier Discount	Volume From	To	Price per Can (Can ONLY)			
			211 x 101.5	211 x 30 MM	211 x 108	211 x 114.5
		1,000,000	\$ 0.720	\$ 0.670	\$ 0.770	\$ 0.820
2.5%	1,000,001	2,000,000	\$ 0.702	\$ 0.653	\$ 0.754	\$ 0.800
5.0%	2,000,001	3,000,000	\$ 0.684	\$ 0.637	\$ 0.732	\$ 0.779
7.5%	3,000,001	4,000,000	\$ 0.666	\$ 0.620	\$ 0.712	\$ 0.759
10.0%	4,000,001	No Limit	\$ 0.648	\$ 0.603	\$ 0.693	\$ 0.738

EXHIBIT G



THE BETTER WAY TO PACKAGE



ENSURING QUALITY EVERY STEP OF THE PACKAGING PROCESS

Our patented process of packaging controlled substances in a hermetically sealed container with a modified atmosphere greatly extends the shelf life of any contents. Our modified seamer hermetically seals each can after it's flushed with liquid nitrogen with an easy to open pop-top lid to create an air-tight and completely odorless package—that is, until you pop the lid and inhale the ripe, harvest-fresh aroma.

One of the greatest advantages that nitrogen packing achieves is the ease of implementation. Our system is designed for companies to quickly make a transition to a more efficient and all around higher quality packaging system.

WHAT SETS US APART

FRESHNESS

A packaging system specifically designed for cannabis and pharmaceutical-grade products provides a

unique process of canning that hermetically seals and preserves the contents. Hermetic sealing is a process of utilizing nitrogen to replace air and moisture, thereby extending shelf life.

SHELF-LIFE

With year-round fresh product, our clients can release products with confidence. If your product is in an industry where shelf life is minimal. NitroTin changes everything.

PRESERVATION

One of the greatest advantages that nitrogen packing achieves is allowing a company to strategically play the market. Preserved back stock will be the key to seamless sales and distribution.

STORE & TRANSPORT

Products can also be moved around the globe without being damaged, crushed or broken during freight/mailing and ready to sell without further handling, nitrogen fresh as the day it's sealed.

BRANDING

Branding is more than a logo or a product. It is a promise of quality and reputation! We provide consistency in quality through ensuring freshness in all packaged products!

TRACKING

In addition to an external bar coding system, additional tracking and monitoring is available by utilizing a radio-frequency identification (RFID) tracking chip embedded in the



World-Class Packaging Products

Our products help your business grow by providing the best packaging process around. Easily package, brand, store, and ship, all with one simple process.



Easily Track Product

Our partnership with Authentic Vision allows our customers to easily track product with a simple scannable label. This helps you combine real-time business insights with market intelligence to enhance decision making, increase control, and create new opportunities.

[LEARN MORE](#)

Copyright © 2018 Nitrofin

The Better Way To Package

EXHIBIT H



(<https://web.archive.org/web/20190125112152/https://n2pack.com/login/>).
Inquire
Here

(<https://web.archive.org/web/20190125112152/https://n2pack.com/>).

(<https://web.archive.org>



**ENSURING QUALITY EVERY
STEP OF THE PACKAGING
PROCESS**

Our patented process of packaging controlled substances in a hermetically sealed container with a modified atmosphere greatly extends the shelf life of any contents. Our modified seamer hermetically seals each can after it's flushed with liquid nitrogen with an easy to open pop-top lid to create an air-tight and completely odorless package—that is, until you pop the lid and inhale the ripe, harvest-fresh aroma.

One of the greatest advantages that nitrogen packing achieves is the ease of implementation. Our system is designed for companies to quickly make a transition to a more efficient and all around higher quality packaging system.





Ready to get started?

Step 1.

Apply For A License

Please fill out the license application in order to work with N2 Packaging and our patented process.

Step 2.

Get License Approval

Once we approve your license, we will set up your pricing allowing you to order product directly from our customer portal.

Step 3.

Order Product

Now that your account is created and the pricing has been established, you can now order product through our customer portal.

APPLY FOR LICENSE

(<https://web.archive.org/web/20190125112152/https://n2pack.com/apply/>)

THE BETTE

FULLY COMPLIANT

What Others Think

See how Mercy Wellness got the market edge from our patented process.

Sorry, the Wayback Machine does not have this video (JqdNKLmIOyl) archived/indexed.

[See More](#)

[\(https://web.archive.org/web/20190125112152/https://n2pack.com/testimonials/\)](https://web.archive.org/web/20190125112152/https://n2pack.com/testimonials/)

Well

Our products help your business grow by providing the best packaging process around. Easily package, brand, store, and ship, all with one simple process.

[VIEW OUR PRODUCTS](https://web.archive.org/web/20190125112152/https://n2pack.com/product/)

(<https://web.archive.org/web/20190125112152/https://n2pack.com/product/>)

2018 Regulatory Requirements

N2 Packaging's child resistant lids check all of the boxes for regulatory requirements. We will continue to monitor regulatory requirements and work hard to help our partners not only preserve their product, but stay compliant in 2018.

See Our Certification (<https://web.archive.org/web/20190125112152/https://n2pack.com/wp-content/uploads/2017/12/Certificate-U200-956.pdf>)



(<https://web.archive.org/web/20190125112152/https://n2pack.com/product/>)

✓ **Tamper-evident**

✓ 16 C.F.R. 1700.1(b)(4) Certified resealable Lid

✓ Opaque for edibles with a clear option available

Recall notices – Our unique identifier goes beyond seed
✓ to sale by including a back end software with the ability to send recall notices.



Easily Track Product

N2 Packaging's partnership with Authentic Vision allows our customers to easily track product with a simple scannable label. This helps you combine real-time business insights with market intelligence to enhance decision making, increase control, and create new opportunities.

[Learn More](#)

(https://web.archive.org/web/20190125112152/https://www.authenticvision.com/)

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